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AN ECONOMIC REPORT TO THE GOVERNOR OF THE STATE OF TENNESSEE

On the State's Economic Outlook

Prepared by

CENTER FOR BUSINESS AND ECONOMIC RESEARCH
COLLEGE OF BUSINESS ADMINISTRATION
THE UNIVERSITY OF TENNESSEE, KNOXVILLE

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In Cooperation With

THE TENNESSEE STATE PLANNING OFFICE

Published By

The Tennessee State Planning Office
Nashville, Tennessee

January 1983

Authorization Number 1971; 600 copies
Cost per copy: $4.30

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The preparation of this report was financed in part through EDA Grant 04–25–01355–04 and the Tennessee State Planning Office.

FOREWORD

This volume constitutes the 1983 edition of An Economic Report to the Governor of the State of Tennesse, providing a comprehensive and unified assessment of the most probable future economic environment for the U.S. and Tennessee. State forecasts, annually to 1991, represent the collective judgment of the staff at the Center for Business and Economic Research at The University of Tennessee, Knoxville in interaction with the Tennessee Econometric Model. The national forecast was prepared by the Wharton Econometric Forecasting Associates (WEFA) in Philadelphia, Pennsylvania, and released in December 1982. An array of assumptions, particularly at the national level, condition the analysis. These assumptions are contained in Chapter 2, following the Executive Review. Chapter 3 presents a more detailed evaluation of the forecast for each major sector of the Tennessee economy.

The Appendix of this Report contains the complete set of forecast data to 1991 as well as a comparable set of historical data from 1972 through 1981. For users of detailed data, the latest years of historical information contain revisions of preliminary numbers contained in last year's Report.

The primary purpose of these annual volumes--published, disseminated, and partially financed by the Tennessee State Planning Office--is to provide wide public dissemination of the most current possible economic analysis to planners and decision makers in the public and private sectors.

David A. Hake, Director
Center for Business and Economic Research

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CHAPTER 1

EXECUTIVE REVIEW

This 1983 economic report is being prepared at a time when the arrival of the long-awaited economic recovery, while not yet here, seems to be approaching. While signs of an early recovery are getting progressively stronger, several negatives still persist. Some analysts are concerned with the paucity of recovery signs. Certainly all signs are not pointing in one direction. Others worry that the Federal Reserve's efforts to stimulate the economy will revive inflation and high interest rates, choking off any significant recovery. Most caution that recovery, when it does arrive, will be slow and uneven. They believe that heavier consumer spending in the early months of 1983 is necessary to get the economy moving forward. The recent upswing in housing construction and automobile sales are significant signs of consumer spending recovery. As the economy gathers steam, capital investment should complement consumer spending, leading to a broad-based but slow recovery.

Peak growth years in the next decade will be in 1984 and 1985. The inflation psychology seems to be largely broken, yet inflation will remain historically high throughout the decade. The decade's major economic problems now seem to be high unemployment and high interest rates. With only nominal economic growth, new jobs which are created will not be sufficient to reduce the unemployment rate below 7.0 percent, at least not until late in the decade, and high federal deficits will contribute to continued historically high interest rates.

The National Outlook

Several signals of economic activity on the national horizon (some positive, some negative) are certain to influence the state's economy in the next few months. On the positive side, the recent surge in residential housing, the increase in automobile sales, and the decline in new unemployment claims provide evidence that the recession may be reaching bottom. On the negative side, factory capacity utilization reached an historic low, and industrial production reached a five-year low in November 1982.

Rising sales figures also may be signalling that the current downturn is about over. Recent surveys of consumer confidence show a modest improvement. Consumer spending should be spurred by falling interest rates (yet they will remain at historic highs) and, in the spring, by above-average federal personal income tax refunds and reduced 1982 year-end tax liabilities. Consumers will be left with even more after-tax dollars following the final stage of federal income tax reductions in July 1983. The recent surge in stock prices may be a minor consumer stimulus because higher prices make stockholders feel wealthier and more willing to spend. Partially offsetting the feeling of growing wealth is the decline in equity growth in residential housing as inflation abates. Another two-edged sword is the significant drop in inflation. On the one hand, it may encourage consumers by restraining price increases, yet this very fact of price restraint may encourage a wait-and-see attitude for major purchases. Finally, personal income adjusted for inflation may resume its growth after a two-year pause.

Further, on the negative side, continued high unemployment and job uncertainty will restrain the willingness to spend in the early months of 1983. While analysts expect that the unemployment rate, now 10.8 percent, may go a little higher, the decline in jobless claims could indicate the unemployment rate is ready to level off and begin a slow decline. Another near-term negative is the savings rate, now nearing 8.0 percent. Returns to savings are at a near record high as inflation abates.

Even the modest improvement in consumer spending, especially in automobile and housing sales, should resuscitate the manufacturing sector and result in small production gains. Business-fixed investment, however, will lag even farther into the future, possibly contributing negatively to economic recovery in 1983. Factory capacity use (now at 67.8 percent) will have to recover significantly before the impetus to invest returns. Resurgence in new plants and equipment usually lags consumption in an economic upturn, but the lag in 1983 is not likely to forestall modest recovery due to the strength of the much larger consumer sector. By 1984, relatively robust investment should complement growing consumer spending. Coupled with the excess productive capacity, historically high interest rates will contribute to offsetting the investment stimulus provided by supply-side economics in 1983, but to a lesser extent in 1984.

The short-term national forecast is for a weak recovery fueled primarily by consumer spending and residential housing. The effect will be growth in real gross national product of 3.2 percent in 1983,

hardly a robust recovery, and 5.0 percent in 1984. The peak growth year of the decade is forecast to be 1984, when the resurgence of consumer spending will be reinforced by the recovery of business investment. Over the rest of the decade, the growth pattern will be erratic. Growth will moderate in 1985 and reach another low point in 1986. Recovery in 1987 to 1989 will be followed by a final decade pause in 1990.

The State Outlook

The existence of these opposing trends at the national level preclude expectations that 1983 will be an outstanding growth year. Nominal positive real growth in 1983, however, will be followed by significantly greater growth in 1984. Over the full decade, the growth pattern in Tennessee is expected to parallel that of the nation. But while growth in Tennessee has lagged that of the nation in recent years, it is expected to achieve the national level by mid-decade.

Short-term Outlook

After a decline in 2 of the last 3 years, Tennessee's gross state product is expected to show a 2.8 percent real growth in 1983 and a more significant growth of 4.0 percent in 1984. Neither, however, seems quite adequate to reduce the unemployment rate below 10.0 percent. Growth will be strongest in manufacturing and construction, both starting off slowly in the early months of 1983 and gathering impetus throughout the year. Peak growth rates will come in 1984 when interest and mortgage rates are expected to moderate even more. Durable goods manufacturing will come on strong in 1984 as

factory capacity use reaches more normal levels, leading to a revival of business-fixed investment. As construction revives (both residential and nonresidential) the Tennessee economy will bloom significantly, but not spectacularly. Tennessee durable goods manufacturing is closely related to construction and will benefit as the construction industry of the nation improves.

Government output will be, perhaps, the weakest point in the economy in both 1983 and 1984 because of the paucity of public revenues brought on by the reluctance of state and local officials to raise taxes (or perhaps, instead, of the fierce taxpayer resistance to higher taxes) and the decline in federal fiscal transfers. Government will, in fact, contribute negatively to the state's output growth in both 1983 and 1984.

Despite modest economic recovery and an overall increase in employment, public sector employment is expected to decline by 4,500 from 1982 to 1984 to the lowest total since 1976. Despite this decline, total nonagricultural jobs are projected to increase to 1,730,400 in 1983 and 1,756,700 in 1984, about 2.5 percent in two years, with major increases being in manufacturing, services and construction. Only modest employment growth is projected for transportation, communication, and public utilities and finance, insurance, and real estate. In the same two years, unemployment is forecast to decline by 15,200 to 227,500 from 242,700. Yet coupled with the growth in the labor force and the modest economic growth, the unemployment rate will decrease only slightly in 1983 and 1984.

While personal income growth is fairly well distributed over several sources, the major dollar gains are in labor-related income,

which makes up over 70.0 percent of the total. When adjusted for inflation, growth is projected to be about two percent in both 1983 and 1984, and in per capita terms to be in a range of 1.4 percent to 1.5 percent, respectively. In unadjusted terms, total personal income is projected to be $44,591 million in 1983 (up 8.0 percent from the previous year) and $48.435 million in 1984 (up 8.6 percent). The drastic reduction in inflation creates an illusion of reduced growth in the unadjusted figures.

Growth in state government revenues is projected to be only modest in fiscal years 1983 and 1984, primarily because of the drastic reduction in inflation. The general sales tax, which accounts for over 50 percent of Tennessee state taxes, leans heavily on inflation for its annual productivity growth because it reacts immediately to changes in inflation. With inflation in the range of 5.0 to 6.0 percent in the coming years instead of the approximately 10 to 12 percent, productivity will be correspondingly lower. Other sales taxes based on volume of sales (motor vehicle-related, alcohol-related, tobacco) are even slower growing than general sales taxes.

Long-term Outlook--The Decade

For the rest of the decade (1985-1991), annual growth in nominal gross state product (GSP) will vary from a high of 9.8 percent in 1985 to a low of 7.4 percent in 1990, a gradual decline brought about by the decline in inflation. After adjustment for inflation, growth will vary from a low of 2.4 percent in 1986 to a high of 3.6 percent in 1987 and 1991.

Even this relatively low real growth rate will be sufficient to reduce unemployment moderately because of the decline in labor force growth. Total employment is expected to reach 2,090,700 in 1991, up from 1,920,000 in 1984 (11.08 percent). Unemployment will decline from 228,300 to 123,000 and the labor force increase from 2,144,600 to 2,251,600.

The strongest employment growth is projected to be in construction, trade, services, and finance, insurance, and real estate. Government employment will continue to grow slowly and agricultural jobs will continue their long-term decline. Growth in manufacturing employment will remain just about on a level with overall employment growth.

Growth in personal income will taper off from 9.5 percent in 1985 to 7.3 percent in 1990, primarily because of the decline in inflation. In real terms, it will peak at 3.4 percent growth in 1988 before starting a gradual decline to 1991. Unadjusted personal income is projected to reach $84,817 million in 1991, up by 75.12 percent from the 1984 level of $48,435 million. Labor-related income accounts for most of the projected growth because of its relatively large size. After adjustment for inflation, personal income is expected to reach $25,508.8 million, up by 21.7 percent from the 1984 level.

CHAPTER 2

STATE AND NATIONAL OUTLOOK

As 1983 opens, there seems to be some light on the nation's economic horizon. The recession, now 18 months old, has become the longest slump since World War II. The prime interest rate started a gradual decline in July and by year end was in the 11 percent to 12 percent range. Mortgage rates fell about three percentage points, to the 12 percent to 13 percent range. The year's increase in consumer prices was held to about 6 percent, two-thirds of the 1981 figure. The Federal Reserve system seems to be working slowly to reduce interest rates even farther without re-igniting inflation. The one-two punch of reduced inflation and interest rates has already spurred the purchases of new homes and other big ticket items. Further declines should encourage even more consumer activity. Also fueling consumer demand by mid-year will be the lower federal income taxes scheduled to take place on July 1.

But even with these optimistic signs, serious problems persist for 1983. Unemployment, which soared to a post-war high of 10.8 percent in November 1982, is expected to decline only modestly in 1983. Factories are currently operating at the lowest level of capacity in the post-war period. The standard national forecast is for a weak recovery, led only by a moderate rise in consumer spending.

Business investment, which is necessary to broaden and sustain economic recovery, will not escalate greatly until 1984. Even with lowering interest rates and inflation, business investment, plagued by the combination of low consumer demand and capacity utilization, will be slow to recover.

Tennessee has suffered from recession along with the nation. For the state's economic health to improve this year, that of the nation must also improve.

This chapter continues with a summary of recent (1974-1981) state economic performance, followed by two sections that briefly discuss the state's short- (1983-1984) and long-term (1985-1991) economic forecasts. Only a few basic economic indicators are presented in the five tables and the discussion. Additional statistical data are available in Appendix I and Appendix II and in the discussions by economic sector in Chapter 3.

RECENT ECONOMIC HISTORY

Selected statistics of the state's recent economic performance are featured in Appendix II and basic data are summarized in Table 1. The period 1974-1981 covers the two most recent recessions (the latter, of course, continuing well through 1982). While the cycle of output and income over the seven-year period was similar in the state and nation, the state appeared to have a more violent cycle. This is somewhat contrary to earlier history and common belief that Tennessee is less susceptible to cycles than the nation. In constant terms, GSP fell by 5.1 percent in 1975 (GNP by 1.1 percent). However, post-recession growth was more rapid in Tennessee, 7.3 percent to 5.5 percent in 1977 and 6.3 percent to 5.0 percent in 1978. The cyclical comparisons were similar in 1980 and 1981. Given this variability, growth over time in the state compared favorably to the nation.

TABLE 1

SELECTED ECONOMIC INDICATORS, ANNUAL PERCENTAGE CHANGE, TENNESSEE, SELECTED YEARS, 1974-1981

	1974	1975	1977	1978	1980	1981
Gross State Product						
(Millions of current dollars)	$26,011	$27,139	$34,885	$39,629	$46,028	$51,149
Percent Change	8.86	4.34	13.97	13.60	5.50	11.12
(Millions of constant 1972 dollars)	23,012	21,838	25,160	26,735	26,731	27,271
Percent Change	0.58	-5.10	7.25	6.26	-2.95	2.02
Personal Income						
(Millions of current dollars)	18,793	20,304	25,155	28,542	35,031	38,957
Percent Change	10.47	8.04	10.95	13.46	9.53	11.21
(Millions of constant 1972 dollars)	16,159	16,217	18,052	19,146	19,551	20,029
Percent Change	0.40	0.36	4.89	6.06	-0.68	2.44
Labor Force (In thousands of persons)	1,820	1,809	1,945	1,969	2,082	2,111
Percent Change	3.88	-0.60	4.07	1.23	1.91	1.39
Employment (In thousands of persons)	1,728	1,658	1,822	1,856	1,930	1,919
Percent Change	2.67	-4.05	3.70	1.87	0.31	-0.57
Unemployment (In thousands of persons)	92	151	123	113	152	192
Percent Change	35.29	64.13	9.82	-8.13	27.73	26.32
Unemployment Rate (Percent)	5.1	8.3	6.3	5.7	7.3	9.1

SOURCE: Tennessee Econometric Model, Historical Data.

Employment peaked in Tennessee at 1,930,000 in 1980 (1,747,200 nonagricultural jobs) but declined mildly in 1981. Unemployment increased in 1980 and 1981, more so in the state than in the nation. An aggregate loss of nonagricultural jobs was experienced in 1975, 1980, and 1981, and while the annual loss was greater in 1975, it was more widespread in the 1980-1981 years. Much of the recent private sector job losses were attributable to high interest rates, while government sector losses were due to the decline in growth of public revenues.

Tennessee unemployment also demonstrated a cyclical pattern in the 1974-1981 period. It peaked at 151,000 in 1975 (up 64.1 percent from 1974), declined rapidly in 1976, peaking again in 1980 and 1981 at 152,000 and 192,000, respectively. The state unemployment rate, while historically remaining below the national level, finally equalled the national rate in 1979 and surpassed it in 1980 and 1981. The turnaround is attributed to a relative change in sectoral output as the state and nation adapt to technological change, the state seeming to lag national changes.

Short-term Forecast (1983-1984)

As noted earlier, the progress of economic growth in Tennessee is closely tied to national economic indicators. The assumptions for several major national variables used in this forecast that directly affect national and state economic activity are listed in Table 2. They include interest rates, federal budget deficits, economic deflators (or inflation indexes) and output per person. Interest rates, now at a 2-year low, are forecast to decline gradually over

the years 1983 and 1984. The money supply as represented by M2 will grow in the 9 to 10 percent range, while inflation as measured by the growth rate of the Consumer Price Index will decrease further in 1983 before starting another moderate climb in 1984, as the economy approaches a more normal growth pattern. For the present, the Federal Reserve Board seems to believe that it has conquered excessive inflation and will concentrate on reducing the interest rate by relaxing the money growth ceiling. Unemployment is now recognized as the major economic problem.

TABLE 2

NATIONAL ECONOMIC INDICATORS, 1982-1984

	1982	1983	1984
Consumer Price Index (Percent Growth)	6.0	5.5	6.6
Producer Price Index (Percent Growth)	1.8	3.4	7.4
M2 (Percent Growth)	9.85	9.25	9.89
Federal Reserve Discount Rate	11.09	8.49	7.96
Prime Loan Rate	14.96	10.53	9.35
Mortgage Rate (Newly Built Homes)	15.23	13.03	11.35
Real Output Per Person (Percent Change)	-1.4	2.0	2.0
Estimated Federal Deficit (In billions)	$140	$161	$136

SOURCE: Wharton Econometric Forecasting Associates, Wharton Long-term Forecast, December 1982.

As interest and mortgage rates decline, consumer durables and housing sales should increase, affecting activity in Tennessee and

the nation. Finally, as factory capacity utilization normalizes, new business investment will be stimulated, but not until well into 1984. All this will affect both Tennessee and the nation, but growth in Tennessee is expected to lag that of the nation through 1984.[1]

As indicated in the statistics of Table 3, gross state product is expected to reach $63.6 billion in 1984 in current dollars, a growth of 144.5 percent in a decade. In real terms, this growth is only 22.9 percent, however. The number of employed persons will grow by 1.00 percent and 1.32 percent, in 1983 and 1984, respectively, to 1,920,000 in 1984. The peak employment of 1,930,000 in 1980 is not projected to be reached again until 1985. Unemployment will peak in 1983 at 244,900 before starting a gradual decline through the rest of the decade. The unemployment rate will remain fairly steady in 1982 and 1983 before beginning its decline from the peak of 11.5 percent in 1982. Peak months for unemployment are expected to be in late 1982 or early 1983. Major employment growth sectors are projected to be manufacturing and services with government employment continuing to decline, at least through 1984.

Both output and income forecasts are expected to lag behind similar national data, as projected by the Wharton forecasters. However, Tennessee economic performance is expected to exceed national performance by the end of the decade.

Long-term Forecast (1985-1991)

After the real decline in state output (GSP) in 1982, and peak growth in 1984, the state's economy is expected to expand at an aver-

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1. More complete data on the Tennessee economic forecast can be found in Appendix I.

TABLE 3

PROJECTIONS OF SELECTED ECONOMIC INDICATORS,
ANNUAL PERCENTAGE CHANGE, TENNESSEE,
1982-1984

	1982	1983	1984
Gross State Product			
(In millions of current dollars)	$53,193	$57,574	$63,561
Percent Change	4.00	8.23	10.40
(In millions of constant 1972 dollars)	26,433	27,169	28,278
Percent Change	-3.07	2.78	4.08
Personal Income			
(In millions of current dollars)	41,280	44,591	48,435
Percent Change	5.96	8.02	8.62
(In millions of constant 1972 dollars)	20,107	20,530	20,959
Percent Change	0.39	2.10	2.09
Labor Force (In thousands of persons)	2,118.9	2,139.8	2,147.5
Percent Change	0.37	0.99	0.36
Employment (In thousands of persons)	1,876.2	1,895.0	1,920.0
Percent Change	-2.23	1.00	1.32
Unemployment (In thousands of persons)	242.7	244.9	227.5
Percent Change	26.41	0.90	-7.11
Unemployment Rate (Percent)	11.5	11.4	10.6

SOURCE: Tennessee Econometric Model, December 1982 solution.

age of 3 percent per year through 1991 in real terms. Before adjustment for inflation, output growth will not reach double digits after 1984 because of declining inflationary pressures. For example, the GSP implicit deflator growth rate is expected to drop from 8.9 percent in 1981 to an annual average of about 4.5 percent by the end of the decade, an almost 50 percent decline. The producer and consumer price indexes are forecast to decline in about the same proportions. These and other indicators that influence state economic activity are listed in Table 4.

TABLE 4

NATIONAL ECONOMIC INDICATORS,
SELECTED YEARS, 1985-1991

	1985	1986	1988	1990	1991
Consumer Price Index (Percent Growth)	7.8	7.3	5.3	4.9	5.6
Producer Price Index (Percent Growth)	7.9	8.0	6.7	5.7	5.9
M2 (Percent Growth)	9.5	8.7	8.4	6.9	8.1
Federal Reserve Discount Rate	8.6	8.2	7.8	6.7	7.0
Prime Loan Rate	9.8	9.2	8.8	7.6	7.6
Mortgage Rate (Newly Built Homes)	10.7	10.2	9.8	9.1	8.8
Real Output Per Person (Percent Change)	1.3	0.9	1.4	0.9	1.6
Estimated Federal Deficit (In billions)	$117	$114	$ 87	$ 75	$ 53

SOURCE: Wharton Econometric Forecasting Associates, Wharton Long-term Forecasts, December 1982.

Projections for growth rates for output and income (current and constant dollars), labor force and unemployment data, and unemployment rates are listed in Table 5 for selected years. Greater detail on the state economic projections can be found in Appendix I. As noted above, GSP (current) is expected to remain below double-digit growth after 1984 because of the decline in inflation and moderate real growth. Real growth is not expected to approach the nine-plus percentages of the early 1970's or the seven-plus percentages of the late-mid 1970's.

TABLE 5

PROJECTIONS OF SELECTED ECONOMIC INDICATORS, ANNUAL PERCENTAGE CHANGE, TENNESSEE, SELECTED YEARS, 1985-1991

	1985	1986	1988	1990	1991
Gross State Product					
(Millions of current dollars)	$69,797	$76,117	$90,096	$104,315	$112,867
Percent Change	9.81	9.05	8.27	7.36	8.20
(Millions of constant 1972 dollars)	29,157	29,854	31,990	33,925	35,149
Percent Change	3.11	2.39	3.44	2.69	3.61
Personal Income					
(Millions of current dollars)	53,016	57,767	68,024	78,657	84,817
Percent Change	9.46	8.96	8.13	7.34	7.83
(Millions of constant 1972 dollars)	21,447	21,948	23,448	24,852	25,509
Percent Change	2.33	2.34	3.43	2.90	2.64
Labor Force (In thousands of persons)	2,149.5	2,158.2	2,163.4	2,198.2	2,218.8
Percent Change	0.09	0.41	0.22	0.87	0.93
Employment (In thousands of persons)	1,939.4	1,954.8	2,004.1	2,059.5	2,090.7
Percent Change	1.01	0.79	1.35	1.31	1.52
Unemployment (In thousands of persons)	210.0	203.3	159.2	138.7	128.1
Percent Change	-7.67	-3.18	-12.13	-5.23	-7.70
Unemployment Rate (Percent)	9.8	9.4	7.4	6.3	5.8

SOURCE: Tennessee Econometric Model, December 1982 solution.

CHAPTER 3

OUTLOOK FOR SPECIFIC INDUSTRIES

by

Irving Dubov, Richard A. Hofler, John W. Mayo,
Patricia D. Postma, and Niles C. Schoening

Following in this chapter are analyses of economic activity and the forecasts for nine specific industries in the state. Sectors which will be discussed are manufacturing; agriculture; construction; services; trade; finance, insurance, and real estate; transportation, communications, and public utilities; energy, and government.

MANUFACTURING

Over the past decade, the manufacturing sector in Tennessee has fared quite well, both absolutely and relative to the nation as a whole. From 1972 to 1981 Tennessee manufacturing output grew at an average annual rate, in real terms, of 2.96 percent, while at the national level manufacturing output grew by only 2.31 percent. However, during the last three years, the Tennessee economy as a whole, and Tennessee manufacturing in particular, has suffered from economic stagnation. From 1978-1981 manufacturing output in Tennessee grew at a meager annual growth rate of .34 percent. Over the same time period manufacturing employment in Tennessee fell at an annual rate of 1.24 percent.

While economic stagnation at the state level can be attributed largely to the ongoing national recession, some differences in the nature and depth of the state versus national recession are becoming apparent in the manufacturing sector. These differences are apparent in both the output of manufactured goods and employment in the production of these goods. Figures 1-4 provide a comparison of recent

growth rates of durable and nondurable goods employment and output in Tennessee and the nation as a whole.

Figures 1 and 2 provide a comparison of recent employment growth rates in Tennessee durable and nondurable goods relative to the nation. For these figures, an employment index with a 1972 base (=100) was created for Tennessee and the U.S. The index rises and falls over time as employment grows and shrinks relative to the 1972 average employment. In Figures 1A and 1B we see that non-durable and durable manufacturing employment, in both Tennessee and the U.S. as a whole, is quite recession-sensitive. Employment declines occurred in the recessions of 1970, 1974-75, and 1980 and 1981. In Figures 2A and 2B, the Tennessee employment index is divided by the U.S. index plotted over time for durable and nondurable goods. The result is a "relative

FIGURE 1A

NONDURABLE GOODS
TENNESSEE AND U.S. EMPLOYMENT INDICES

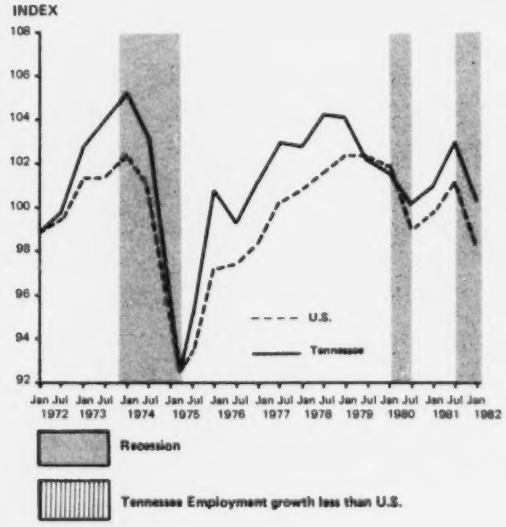
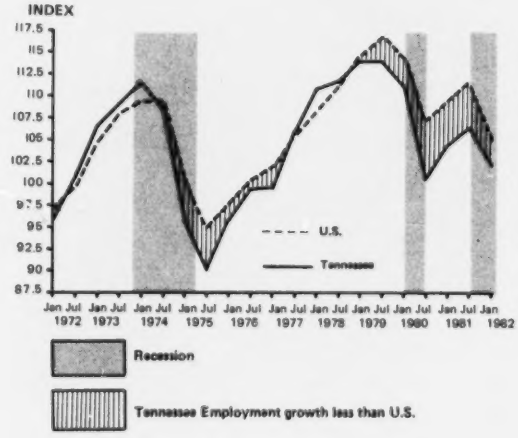


FIGURE 1B

DURABLE GOODS
TENNESSEE AND U.S. EMPLOYMENT INDICES



SOURCE: Center for Business and Economic Research.

FIGURE 2A

NONDURABLE GOODS
RELATIVE GROWTH RATIO

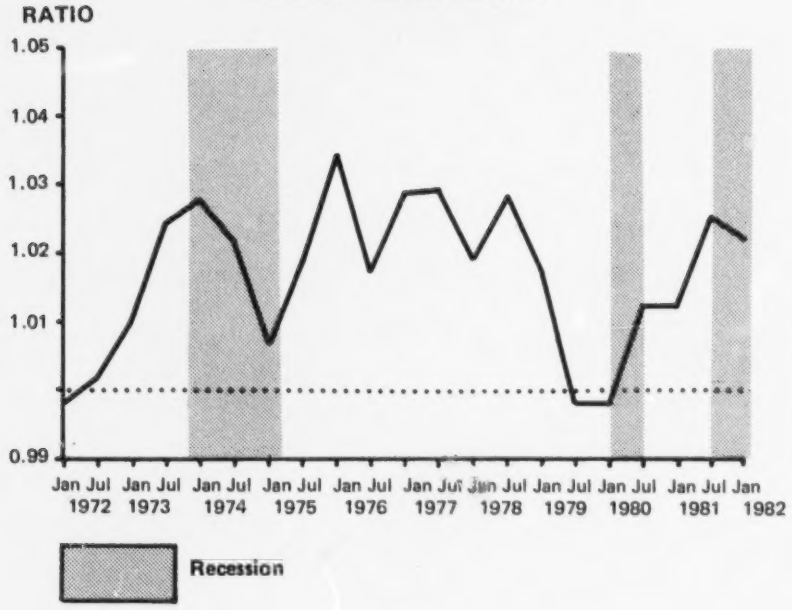
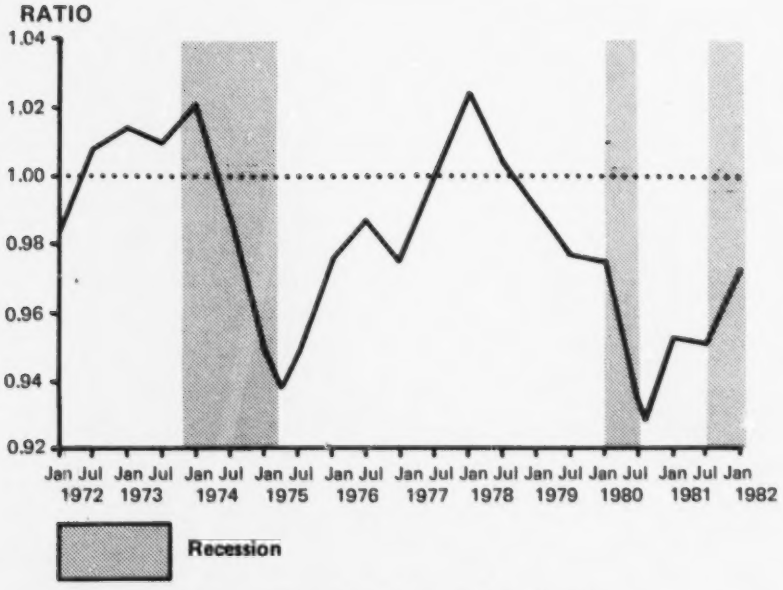

RATIO
1.05
1.04
1.03
1.02
1.01
0.99
Jan Jul Jan Jul Jan Jul Jan Jul Jan Jul Jan Jul Jan Jul Jan Jul Jan Jul Jan Jul Jan
1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982
Recession

FIGURE 2B

DURABLE GOODS
RELATIVE GROWTH RATIO



SOURCE: Center for Business and Economic Research.

growth ratio." If the ratio exceeds one for a particular month and economic sector, then Tennessee employment growth from 1972 until that month exceeded employment growth in the same sector of the U.S. A ratio less than one indicates employment growth in Tennessee at a rate less than that of the nation. This ratio, plotted over time, gives a comparison of employment growth in Tennessee and the U.S. after removing the influence of business cycle swings.

Figure 2A reveals an interesting insight concerning the nature of the current recession in Tennessee relative to the nation as a whole. In Figure 2A we see that Tennessee's nondurable goods employment, while suffering from absolute declines as in Figure 1A, has fared quite well relative to the U.S. in the current recessionary period. The ratio has consistently remained above one, indicating that nondurable goods employment in Tennessee has outpaced its national counterpart. Furthermore, from 1980 to 1982 we see that the relative growth ratio gap between Tennessee and the U.S. has widened. This indicates that Tennessee's nondurable goods employment has not been as sensitive to the current economic downturn as nondurable goods employment elsewhere.

In contrast to nondurable goods employment, the relative growth ratio for durable goods is shown in Figure 2B. There we see that durable goods employment in Tennessee has suffered not only absolutely, but also relative to the U.S. Beginning in 1978, employment growth in Tennessee durable goods has consistently been slower than in the nation as a whole. Since 1980 Tennessee's relative position in durable goods employment has improved mildly, yet overall growth since 1972 still remains less than in the U.S.

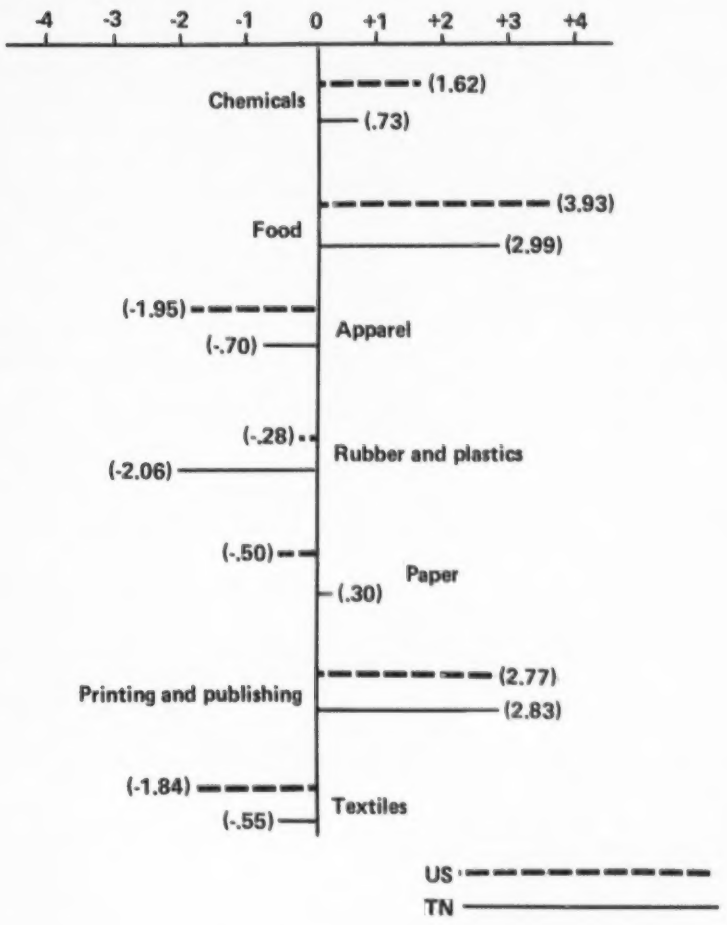
Now let us examine the impact of the national recession on the output of manufactured goods in Tennessee and the rest of the U.S. In Figure 3 we see that growth in nondurable goods output has not been particularly high since 1978, either in the United States as a whole or in Tennessee. However, in four of seven nondurable goods categories, Tennessee's output has either grown more rapidly, or fallen less sharply, than in the rest of the country. Only in the output of rubber and plastics has Tennessee's output fallen significantly more than in the U.S. This suggests, as did the employment data presented in Figure 2, that the national recession has not disproportionately affected Tennessee's nondurable goods sector. In Figure 4 the growth rates of various durable goods for the 1978-1981 period are compared for Tennessee and the U.S. In five of eight durable goods categories, Tennessee's output growth has fallen short of that achieved in the United States. Furthermore, two sectors in which Tennessee's output growth exceeded the nation, primary metals and lumber, are among the smallest sectors in the Tennessee economy. This suggests that a major cause of the current differential in local and national unemployment rates has been the inability of durable goods output growth in Tennessee to hold its own in the current recessionary period.

Short-term Forecast

Generally speaking, the next two years will be characterized by economic recovery in the manufacturing sector. Growth will be slight in early 1983, but will gain momentum in late 1983 and 1984. Real output, real wages, and employment will all increase in 1983 and 1984.

FIGURE 3

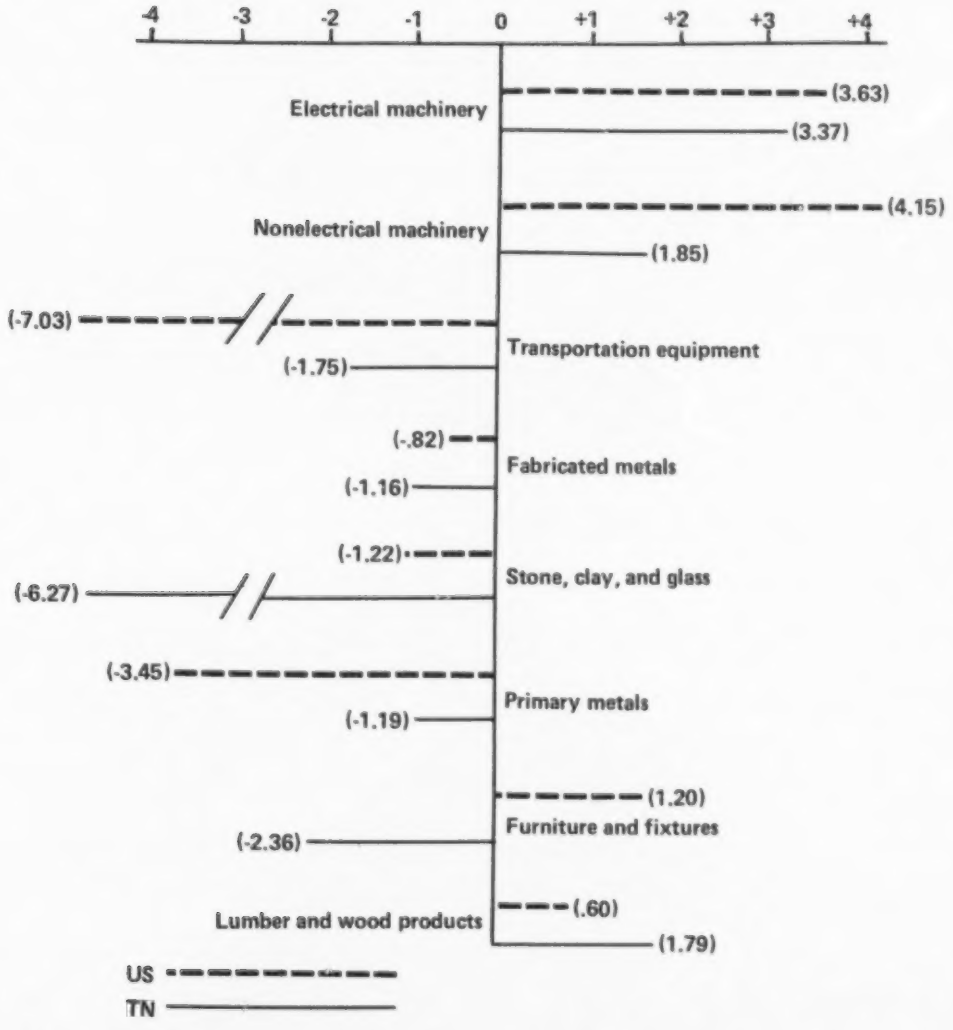
NONDURABLE GOODS OUTPUT
COMPOUND ANNUAL GROWTH RATES
1978 – 1981



SOURCE: Tennessee Econometric Model, Historical Data and Wharton Econometric Forecasting Associates, *Wharton Long-term Model Historical Data*, December 1982.

FIGURE 4

DURABLE GOODS OUTPUT
COMPOUND ANNUAL GROWTH RATES
1978 – 1981



SOURCE: Tennessee Econometric Model, Historical Data and Wharton Econometric Forecasting Associates, *Wharton Long-term Model Historical Data*, December 1982.

Short-term real output growth is most meaningfully differentiated between nondurable goods and durable goods. Real output growth of Tennessee's nondurable goods will be moderate in both 1983 (4.24 percent) and 1984 (4.79 percent). Textiles and apparel will lead 1983 nondurable goods growth, while in 1984 rubber and plastics will lead nondurable goods growth. Durable goods growth will begin slowly in 1983 (3.87 percent) and become more vigorous in 1984 (8.80 percent). Growth of lumber, transportation equipment, nonelectrical machinery, and primary metals will be particularly strong in 1984, as economic recovery should be in full swing.

The employment pattern in the manufacturing sector will mimic the output growth pattern. Employment growth in nondurable goods should be mild in both 1983 (1.36 percent) and 1984 (1.71 percent), while durable goods employment will begin slowly in 1983 (0.92 percent) and become stronger in 1984 (4.08 percent). Particularly strong employment growth will be registered in transportation equipment for durable goods (almost 8 percent in 1984) and apparel in the nondurable goods sector (3.7 percent for 1983-84).

Long-term Forecast

The long-range outlook for economic activity in the Tennessee economy remains bright. Manufacturing output and employment should both increase moderately (2.83 percent and 0.84 percent, respectively) from 1985 to 1991. However, it should be noted that, as the current recession has shown, the durable goods manufacturing sector in Tennessee will continue to be very recession-sensitive. Tennessee durable goods that will show consistently above-average output growth

in the long term include transportation equipment, electrical machinery, and primary and fabricated metals. Long-term output and employment growth in the nondurable goods sector in Tennessee will be more consistent than in its durable goods counterpart. Real output will grow in the 2-3 percent range for the 1985-1991 period (see Appendix I, Table 7 for details), while employment will grow around 1 percent annually (see Appendix I, Table 10). Real wages in the manufacturing sector will increase at an annual rate of 1-2 percent in Tennessee during the 1985-1991 period as the productivity of manufacturing employees increases.

AGRICULTURE

Short-term Forecast

For many who lived through the economic hard times of the 1930's, there are elements of deja vu in the current situation facing the agriculture sector. The general economy is in recession. Prices at the farm level are depressed by bumper crops and large stockpiles of nonperishables. Farm export markets have contracted and may be weakened further by new worldwide restrictive trade policies. Once again, American farmers are being penalized in the marketplace for being too efficient. Over the next year, gross farm income at the national level may rise 1 or 2 percent. Receipts from cash crops are expected to fall, but this will be offset by increased receipts from livestock products and direct government payments. However, any net gains in gross income will likely be drained away by increased production expenses.

Some encouragement can be drawn from demand factors projected for 1983. Modest recovery from the current recession is expected by the second quarter of 1983. Growth rates in real GNP during the last three quarters of 1982 will average only 0.33 percent. For 1983, however, these rates are expected to move from 2.3 percent during the first quarter to over 4 percent in the last quarter. The outlook for real consumer spending is also on the favorable side, moving from an average growth rate of 2.0 percent during the last three quarters of 1982 to an average of 3.1 percent during the first two quarters of 1983.

The projections for real business capital outlays are not as encouraging. After declining at an average rate of 11.3 percent during the last three quarters of 1982, a further decline of 6.5 percent is expected during the first three months of 1983 before a 3.3 percent increase occurs during the second quarter.

During the first part of the current recession, real disposable income per capita expanded, mainly because reductions that occurred in income from wages, salaries, rentals and other sources were more than offset by government transfer payments and increased income from interest. But as interest rates decline, this source of real consumer purchasing power shrinks also. Other things being equal, declining inflation rates, federal income tax rates and interest rates should stimulate increased consumer spending. However, negative influences have arisen from consumer concerns with unemployment, government policies and the recession itself.

The recently enacted 5-cents-per-gallon increase in federal gasoline taxes will initially reduce consumer purchasing power somewhat.

The extent of the decrease will depend on how long the current decreases in retail gasoline prices persist. With the difficulties that OPEC is having in assigning production quotas among its members, gasoline price decreases in early 1983 may offset the effects of the federal tax increase.

Of perhaps deeper concern is the large federal budget deficit anticipated for FY 1984--something on the order of $200 billion. A deficit of this magnitude could reverse current trends of declining interest rates enough to hobble even the modest economic recovery expected later in 1983. Accordingly, the Administration and Congress are faced with the extremely difficult problem of finding some mutually acceptable combination of cuts in defense and nondefense outlays and/or tax increases.

An important aggregate demand factor is the employment situation. The Wharton forecast includes total U.S. employment levels of 101.5 and 104.5 million persons, respectively, in 1983 and 1984. The corresponding unemployment rates for the two years are 9.7 and 8.9 percent, respectively.

All of this adds up to very modest increases in total domestic per capita food consumption in 1983, with an increase of perhaps 1 percent. Crop product food consumption will increase, but consumption of animal product foods will decrease. Prices of food eaten away from home will increase 4 to 6 percent during 1983, and prices of food eaten at home will increase 3 to 6 percent during the year. The farm value of the items in the U.S. Department of Agriculture's

market basket of foods is expected to increase 1 to 4 percent, but increases in marketing charges are projected at 4 to 7 percent. What this suggests is that little of the expected increases in retail food prices will accrue in the form of higher farm prices. And whatever does trickle down will likely be offset by higher farm production costs.

The value of U.S. agricultural exports declined from $43.1 billion in FY 1981 to $39.1 billion in FY 1982. Most of the value decline resulted from lower prices for major products. The outlook for FY 1983 is not much better. Bulging stockpiles, severe economic conditions in overseas importing nations and higher foreign exchange rates for American dollars all point to another decline in the value of American farm exports in FY 1983--perhaps down to $37.5 billion. Continuation of restrictive trade policies by Japan, members of the European Community (EC) and other trading nations are compounding the difficulties. Japan drastically restricts imports of American beef, citrus and other high value products. EC nations subsidize grain exports that compete with American products on world markets. Increased competition from subsidized EC exports has appeared also in overseas markets for dairy products, beef, and poultry.

There are three options for meeting this situation. One is to go with the status quo and allow the subsidized encroachment into our overseas markets to continue. Alternatively, we can initiate our own programs of export subsidies and restrictive trade policies. Or, we can try to negotiate a reasonable resolution of the conflicts of interest among the nations involved. In any case, the immediate prospects for growth in the value of American farm exports are not bright.

Input Costs

Farm production expenses will continue to rise during 1983. These outlays rose about 3 percent in 1982. Also, continuing high levels of interest rates caused interest expenses to climb to more than $22 billion in 1982. Some relief should reach farm borrowers in 1983 as recent reductions in market rates are transmitted to farm lenders. Increases in farm production expenses should be less than the actual rises in input prices because of expected reductions in crop acreages and reductions in use of fuels, fertilizers and pesticides.

Energy Costs

According to a Fall 1982 U.S. Department of Agriculture Report, U.S. energy costs overall rose about 5 percent during 1982, only one-fourth of the 1981 increase. The most important mitigating factor was a 5 percent fall in prices of diesel and fuel oil. From November 1981 to November 1982, prices paid by farmers for gasoline declined about 5 percent. Prices of liquid propane gas increased 14 percent during the same period.

Only modest increases in the demand for petroleum are anticipated during the next two years. Chase Econometrics projects these increases at 3.1 to 4.4 percent in 1983 and 7.4 to 10.0 percent in 1984. If there are no serious disturbances to Middle Eastern oil production and deliveries, supplies should be adequate, with only modest price increases. The failure of OPEC nations at their December meeting in Vienna to reach agreement on production quotas suggests continuation of price discounting and production in excess of current quotas. Thus, price increases during 1983 will be at most in the 5 to 8 per-

cent range for gasoline and the 4 to 7 percent range for diesel fuel. This will result in price ranges of $1.29 to $1.33 per gallon for gasoline and $1.20 to $1.23 per gallon for diesel fuel.

Natural gas prices, which rose 14 percent in 1981 and about 19 percent in 1982, will continue on a sharp upward trend in 1983. Supplies are more than adequate, and the main cause of the increases is the phased decontrol programs now affecting the industry's production and pricing policies. The increase expected in 1983 is in the range of 15 to 25 percent.

Electric power rates paid by farmers in 1983 will likely increase between 7 to 10 percent.

Farm Machinery

Farm machinery sales during the first 10 months of 1982 decreased drastically from the same period in 1981. Factors responsible included reduced farm incomes, high interest rates, and prices of the machinery items themselves. Sales of two-wheel drive tractors declined 32 percent; sales of four-wheel drive tractors fell 18 percent. Combine and baler sales fell 43 and 36 percent, respectively.

Industry sources are hopeful of revived sales beginning in the first part of 1983 and picking up strength late in the year and in 1984. These expectations are based on current and anticipated declines in interest rates and the average age of equipment that farmers are currently using. Price discounts and interest waivers also are expected to stimulate sales. In the final analysis, however, purchases of new farm equipment will depend on whether the downward trend in real disposable income per farm of the past four years can be reversed

and on whether some measure of reasonable profitability can be returned to the agriculture sector.

Fertilizer

Fertilizer supplies in 1983 will be more than adequate. Reduced demands both domestically and abroad will translate into price increases of no more than 2.5 percent.

Pesticides and Herbicides

Reduced crop acreages and anticipated poor prices for many farm products will tend to reduce total use of pesticides and herbicides. Any price increases, therefore, will be minimal, perhaps averaging 2.0 to 2.5 percent.

Short-term Projections

In Table 6 are shown the values estimated for 1983 and 1984 for selected items included in the agriculture sector of the Tennessee Econometric Model. Also shown are values for 1981 and 1982 and the projected average annual percent changes for 1983 and 1984.

An average annual increase of 3.80 percent is projected for cash receipts from farm marketings for all crops in Tennessee for 1983 and 1984. The estimated dollar figures are $934.2 million and $984.2 million, respectively. The five most important products in this category for Tennessee are soybeans, tobacco, wheat, cotton (lint and seed) and corn. They accounted for 18.9, 13.8, 6.2, 5.8, and 3.1 percent, respectively, of cash receipts from farm marketings in Tennessee in 1981.

TABLE 6

TENNESSEE AGRICULTURE SECTOR, SELECTED ECONOMIC VARIABLES
(Millions of Dollars)

Item	1981	1982	1983	1984	Average annual percent change 1983-84
Cash receipts from farm marketings					
Crops	996.9	913.4	934.2	984.2	3.80
Meat animals	415.8	571.1	610.0	658.7	7.40
Dairy	307.8	326.4	346.3	371.1	6.63
Poultry and eggs	115.1	121.2	127.2	135.4	5.70
Total	1,835.6	1,932.2	2,017.7	2,149.3	5.47
Total expenses	858.4	858.8	884.2	930.5	4.09
GSP from agriculture					
Current dollars	977.2	1,073.5	1,133.5	1,218.8	6.55
1972 dollars	495.1	521.1	529.2	535.2	1.34
Total farm employment (In thousands of jobs)	96.0	92.0	88.2	84.7	-4.05

SOURCE: Tennessee Econometric Model, December 1982 solution.

The average annual change in cash receipts from meat animals for 1983-84 was projected at 7.40 percent. The respective dollar figures are $610.0 million and $658.7 million for 1983 and 1984. Within this category of products, cattle and calves accounted for 13.8 percent and hogs for 8.3 percent of total cash receipts from farm marketings in 1981.

Cash receipts from marketings of dairy products are projected at $346.3 million and $371.1 million for 1983 and 1984, respectively, with an average annual increase of 6.63 percent. The projections for poultry and eggs for the two years are $127.2 million and $135.4 million, respectively, with an average annual increase of 5.70 percent.

For the two years, total cash receipts from farm marketings were estimated at $2,017.7 million and $2,149.3 million, respectively, with average annual increases of 5.47 percent. After deductions are made for production expenses, gross state product from the agriculture sector is projected in current dollars, at $1,133.5 million

for 1983 and $1,218.8 million for 1984. The projections in 1972 dollars are $529.2 million and $535.2 million, respectively, with an average annual increase for each year of 1.34 percent.

Total farm employment, which is composed of hired farm labor and unpaid family laborers, is projected to decline in 1983 and 1984 with an average annual decrease of -4.05 percent.

Long-term Forecast

Many factors, including those noted in the short-term outlook affect the long-term view also. The Parity Ratio (Prices Received Index divided by Prices Paid Index) with a 1977 base was reported at 83 percent for November 1982. This indicates deteriorating terms of trade between farm products and nonfarm goods and services. The relative price declines are reflected also in the trend of lower real net farm income over the past nine years. In 1973, the figure (in 1972 dollars) was $31.6 billion. The amount for 1981 was $12.8 billion. The difficulties are not spread evenly among all farming segments. In the last few years, crop producers have suffered most from the effects of price declines, while cattle and hog feeders in 1982 enjoyed their best net returns in a number of years. Older farmers, with small debt loads, fared much better than beginners burdened by high interest charges on loans contracted in order to get into production.

Among the troublesome situations that will have an impact on the agriculture sector in the foreseeable future are the performance of the overall economy during the next four to six years and developments in international trade and commercial policies around the world.

The performance of the overall economy will be affected most by the apparent success or failure of the supply-side economic policies of the current administration in Washington. The term apparent is used because the crucial issue is the perception that a majority of the electorate has of its effectiveness. The recent mid-term Congressional elections gave mixed signals in this regard. The strength of the economic recovery in 1983 and 1984 will strongly influence the economic policies and programs worked out between the Administration and Congress. The focus of concern will be on projected budget deficits and their effects on interest rates, inflation, and unemployment rates. Obviously, effective domestic market demand for commodities produced in the agriculture sector will be affected by the degree to which the economy recovers from the current recession.

The same factors affecting the short-term outlook for overseas sales of American farm products are of concern in the long term. These include bulging stocks of exportable commodities, economic recession worldwide and restrictive trade policies. Needed to cope with these problems are effective measures to reduce these stockpiles, economic recovery in importing nations, continued reductions in domestic interest rates to slow the appreciation of the American dollar on foreign exchange markets, and a reversal of the drift toward restrictive, protectionist international trade policies.

Long-term Projections

Shown in Table 7 are the values estimated for selected variables included in the agriculture sector of the Tennessee Econometric Model for the years 1984 through 1991. The last column contains the average

TABLE 7

TENNESSEE AGRICULTURE SECTOR, SELECTED ECONOMIC VARIABLES, LONG-TERM FORECASTS (In Millions of Dollars)

Item	1984	1985	1986	1987	1988	1989	1990	1991	Average annual percent change 1984-91
Cash receipts from farm marketings									
Crops	984.2	1,030.2	1,076.3	1,114.7	1,157.4	1,204.8	1,260.3	1,318.6	4.40
Meat animals	658.7	698.0	736.0	766.4	801.2	840.6	888.2	938.9	5.54
Dairy	371.1	399.4	427.8	453.2	476.3	501.2	526.6	557.4	6.13
Poultry and eggs	135.4	142.4	149.1	154.7	160.6	167.0	174.2	181.9	4.57
Total	149.3	2,270.1	2,389.3	2,489.0	2,595.6	2,713.5	2,849.2	2,996.7	5.07
Total expenses	930.5	974.5	1,017.9	1,056.1	1,096.5	1,139.3	1,186.7	1,235.7	4.27
Gross State Product from agriculture									
Current dollars	1,218.8	1,295.6	1,371.4	1,432.8	1,499.0	1,574.2	1,662.5	1,761.0	5.66
1972 dollars	535.2	541.5	548.1	553.3	557.8	563.1	568.6	575.6	1.06
Total farm employment (Thousands of workers)	84.7	81.3	78.1	74.9	71.9	69.0	66.4	64.0	-3.94

SOURCE: Tennessee Econometric Model, December 1982 solution.

of annual percent changes from the preceding year from 1984 through 1991.

An average of annual increases of 4.40 percent in cash receipts from farm marketings of all crops in Tennessee during 1984 through 1991 is projected. The increase in dollar terms between 1984 and 1991 is $334.4 million. Cash receipts from meat animals are projected to increase at an average of annual rates of 5.54 percent, from $658.7 million to $938.9 million. Farm marketings of dairy products are projected to increase $206.3 million, an average of annual increase of 6.13 percent. Finally, the projections for cash receipts from sales of poultry and eggs show an increase of $46.5 million for the period, an average of annual rates of 4.57 percent.

Total cash receipts from farm marketings are projected to increase at an average of annual rates of 5.07 percent, from $2,149.3 million in 1984 to $2,996.7 million in 1991. After deductions are made for production expenses, gross state product from the agriculture sector is projected to increase from $1,218.8 million in 1984 to $1,761.0 million in 1991, with an average of annual rates of increase of 5.66 percent. The projections in constant 1972 dollars show an increase from $535.2 million to $575.6 million, with average of annual increases of 1.06 percent.

Total farm employment--hired farm laborers and unpaid family labor--is projected to decrease steadily at an average of annual rate of -3.94 percent.

CONSTRUCTION

State construction has recently paralleled the fluctuations in the Tennessee and U.S. economies. The last ten years have seen cycles of two- to three-year expansions followed by two- to three-year recessions in the national and state economies and in the construction sector. The easing of mortgage credit conditions and the mid-1975 recovery of the economy stimulated the last expansion in Tennessee construction over the period 1976-1978, yielding the historically highest level of real (adjusted for inflation) output in 1978, $966 million.

As is well known, the bottom fell out in 1980. As mortgage interest rates skyrocketed and the supply of mortgage funds evaporated, real national and state nonresidential and residential con-

struction output declined sharply. In fact, Tennessee's real 1980 contract construction output fell 13.1 percent from its 1979 level, and fell another 3.5 percent in 1981. Few state industries exhibited larger percentage declines in real output.

Short-term Forecast

Interest rates began 1982 at very high levels but declined toward the end of the year.

The Federal Reserve has followed a less restrictive monetary policy which has led to lower interest rates. However, the interest-lowering influences of recent monetary policy have been partially mitigated by continuing expectations of huge budget deficits in the near future. The result of these factors likely will be moderately declining interest rates. Tennessee's real economic activity will grow at ever-increasing rates over the short term, with the decade's peak growth in 1984. The mixed influence on interest rates, plus the stronger performance of the state's economy, will be associated with a revival of both residential and nonresidential construction.

Table 8 shows that real state output fell by over 3 percent in 1982 but will rebound during the next two years, with growth of 2.8 percent in 1983 and over 4 percent in 1984. Surprisingly, real construction output exhibited its greatest single-year short-term growth in 1982 (10.6 percent). It will grow at slower rates in 1983 (5.9 percent) and 1984 (5.3 percent). This deviation from the past, during which construction has paralleled the state's economic activity, is probably due to the demand for housing which was suppressed by earlier high interest rates plus the effects of the World's Fair on East

TABLE 8

TENNESSEE STATE AND CONSTRUCTION INDUSTRY
SELECTED VARIABLES, 1982-1984

Variable	1982	1983	1984
Tennessee Gross State Product			
(Millions of current dollars)	53,193.0	57,574.0	63,561.0
Percent Change	4.00	8.23	10.40
Construction Output			
(Millions of current dollars)	2,269.0	2,634.0	3,035.0
Percent Change	18.59	16.10	15.22
Tennessee Gross State Product			
(Millions of 1972 dollars)	26,433.1	27,168.7	28,277.5
Percent Change	-3.07	2.78	4.08
Construction Output			
(Millions of 1972 dollars)	865.3	915.9	964.4
Percent Change	10.63	5.85	5.30
Construction Employment			
(Thousands of jobs)	81.6	83.9	88.4
Percent Change	6.54	2.80	5.37
Average Annual Wages: All Sectors			
(Current dollars)	14,769	15,761	17,061
Percent Change	5.52	6.72	8.25
Average Annual Wages: Construction			
(Current dollars)	16,078	17,281	18,717
Percent Change	7.33	7.48	8.31
Average Annual Wages: All Sectors			
(1972 dollars)	7,194	7,257	7,383
Percent Change	-0.03	0.87	1.74
Average Annual Wages: Construction			
(1972 dollars)	7,832	7,956	8,099
Percent Change	1.68	1.59	1.79

SOURCE: Tennessee Econometric Model, December 1982 solution.

Tennessee highway and commercial construction. The late 1982 decline in interest rates triggered a burst of construction activity which does not completely follow the state's overall economic cycle. In fact, the early burst of construction will be enhanced by steadily falling interest rates, to yield a momentum which will continue through 1984. That year will see real construction output nearly equal the previous high of $966 million in 1978.

The year 1984 should be a banner one for construction employment, as well as for output. However, employment's path in reaching a 1984 level of nearly 89,000 jobs (equal to the previous high which occurred in 1979) will differ from output's path. Whereas 1982 showed a growth spurt of 6.5 percent, 1983's growth will slow considerably to 2.8 percent. Then, employment will again jump forward during 1984 at an annual rate of 5.4 percent.

Not surprisingly, real average annual wages across Tennessee will mirror the state's real output. The state's wages fell slightly in 1982, but, gathering momentum, will grow at nearly 0.9 percent in 1983 and 1.7 percent the following year. Construction wages can be most clearly characterized as consistent. They exceeded average real wages for all of the state's workers during the previous decade and will do so in 1983 and 1984. In addition, construction real wages will grow at a relatively stable rate, which will vary between 1.6 percent in 1983 and 1.8 percent in 1984.

Long-term Forecast

The period 1985 through 1991 reflects the usual situation of construction output, responding to both Tennessee's overall economic

growth and declining long-term interest rates. Table 9 gives selected

TABLE 9

TENNESSEE STATE AND CONSTRUCTION INDUSTRY
VARIABLES, 1985-1991, SELECTED YEARS

Variable	1985	1988	1991
Tennessee Gross State Product			
(Millions of 1972 dollars)	29,157.4	31,990.1	35,149.1
Percent Change from preceding year	3.11	3.44	3.61
Construction Output			
(Millions of 1972 dollars)	994.6	1,085.8	1,148.1
Percent Change from preceding year	3.13	3.12	2.10
Construction Employment			
(Thousands of persons)	89.9	93.3	98.2
Percent Change from preceding year	1.72	2.16	1.83
Average Annual Wages: All Sectors			
(1972 dollars)	7,507	7,970	8,258
Percent Change from preceding year	1.68	2.03	0.78
Average Annual Wages: Construction			
(1972 dollars)	8,269	8,901	9,310
Percent Change from preceding year	2.10	2.40	0.95

SOURCE: Tennessee Econometric Model, December 1982 solution.

variables for this period. Real GSP will grow steadily and robustly at an average annual rate of 3.2 percent, dipping below 3 percent only twice, 2.4 percent in 1986 and 2.7 percent in 1990. Interest rates, measured by Moody's corporate bond rate, will decline in every year, dropping from 10.01 percent in 1985 to 8.6 percent in 1991. Real construction output will respond to the strong performances of real state output and interest rates, by growing during 1985-1991 at an average annual rate of 2.4 percent, rising from $994.6 million in 1985 to $1,148.1 million in 1991.

Real wages and salaries in the state will also exhibit strong and consistent growth in the long term as they respond to rising demand for construction output. Average salaries in all state sectors will grow at an average annual rate of 1.6 percent, while construction salaries will increase by an average of 2.0 percent per year. During this time the historical excess of construction salaries over statewide average salaries will widen. In 1985, construction salaries will be 10 percent greater than the salaries in all sectors; by 1991, they will be nearly 13 percent larger.

SERVICES

Even during recent recessions, the services sector has maintained a consistently positive performance. Indeed, annual employment gains in services during the past two years have equalled the highest annual gains of the 1970's. Last year's economic forecast, which predicted an upturn in the whole state economy, forecast increases of more than 13 percent in services nominal output for this past year, though we now estimate it increased by about 10 percent. The duration of this recession, however, has affected the short- and long-term outlooks for growth in services, just as it has for every other sector; the outlook for 1983 and the rest of the decade is more conservative than it was a year ago.

Short-term Forecast

Jobs in health services account for nearly one-third of all service jobs both in Tennessee and the U.S. These have increased rapidly over the past decade as federal programs have made extensive

medical care accessible to a much larger segment of the population. Hotels and related travel and tourist businesses, personal services, and business services have also enjoyed relatively high growth over the past decade.

One factor in the lower rates of service growth forecast for the decade ahead is that peak rates have probably passed for growth in health services and educational services (private schools and colleges). As state population increases and recovery brings rising personal income, personal services, entertainment, social and related services should increase.

The growth rate of 7.4 percent in nominal output forecast for 1983 may appear modest compared to 1982's ten percent increase, but the effect of the World's Fair on travel and tourism services temporarily buoyed this sector during 1982. The year 1984 continues with higher growth in nominal output (9.3 percent). As a labor-intensive sector, the services sector shows relatively large gains in the short-run in numbers of jobs. Forecast employment increases of 2.9 percent in 1983 and 2.7 percent in 1984 are higher than in any other sector and should add about 20,000 jobs over the next two years.

Long-term Forecast

Overall, services will continue steady growth over the decade, and it seems likely that the business services component will exhibit the largest gains, particularly in terms of output. This is to some extent dependent upon an upturn in the general economy and the fact that these are inputs to commercial and manufacturing activities. The other underlying factor, however, is the gradual structural change

in the way in which we do our business. More and more of the nation's product is derived not from the production of hard goods, but from the production of intangible services, or "thoughtware," as one analyst has designated it. Whether it is the production of automobiles, urban planning, medical diagnoses, inventory management for trade, or cash management in banking, higher productivity and competitive advantage will increasingly be derived from the employment of business services supplying some form of this "thoughtware."

In view of the historic record, the long-run forecast for the services sector is an interesting one. During the 1970's, growth rates in output from services tended to exceed those of other sectors and rates of employment even more so. Long-run rates of growth in nominal output services will vary modestly from 7.9 percent to 8.7 percent through 1991 and will be generally less than overall growth rates. Services employment, too, shows smaller gains, relative to other sectors than was the case in the past decade, with the addition of approximately 59,000 jobs from 1982 to 1991, compared with 97,000 jobs between 1972 and 1981. Considering the strong growth during the current recession, it seems likely that this long-run forecast for services may be too conservative. The problem, no doubt, stems from the fact that econometric models relate the services sector to the overall performance of manufacturing and commercial activities, which will indeed be less robust during the 1980's than the 1970's, but in addition such historically based models inherently underestimate structural shifts of the kind still underway in our economy.

RETAIL AND WHOLESALE TRADE

Last year's Economic Report to the Governor noted the puzzling performance of Tennessee's trade sector relative to the recession in 1974-75 and also relative to trade nationally during the current recession. That unusual decline in both trade employment and retail sales volume, adjusted for inflation, continued through 1982. Table 18 of Appendix II shows that retail sales in terms of constant dollars declined by only 1.6 percent from 1974 to 1975, whereas 1979, 1980, and 1981 showed declines of 4.38, 3.79, and 0.69, respectively, with approximately stable levels of constant dollar sales for 1982 and 1983. Employment declines show a similar pattern, except that both 1982 and 1983 are forecast to have further declines in trade employment.

Data from the Tennessee Department of Employment Security show that the declines in employment are due largely to durables wholesaling and the retail sector, while nondurable wholesaling employment has held its own over the recent period. Table 10 presents the most recent data available on distribution of Tennessee's wholesale sales. The state's important market in farm products (which is proportionately more than twice as large as that market's share of U.S. wholesale sales) does not react strongly to business cycles and has bolstered nondurable wholesaling during the recession.

Short-term Forecast

The trade sector continues to be disappointing nationally, as well as in Tennessee, as first the July tax cut failed to stimulate consumer spending, then both disappointing fall season sales and

TABLE 10

DISTRIBUTION OF TENNESSEE WHOLESALE SALES

	1977 Sales ($1,000)	Percent of Total
Total Sales	$29,277,435	100.0
Durable	12,540,230	42.8
Motor vehicles and parts	3,919,402	13.4
Home furnishings	450,141	1.5
Lumber and construction materials	938,076	3.2
Sporting, hobby, recreational	365,277	1.2
Metals and minerals	1,152,980	3.9
Electrical goods	1,123,744	3.8
Hardware, plumbing and heating	741,483	2.5
Machinery, equipment and supplies	3,564,490	12.2
Miscellaneous	284,637	1.0
Nondurable	16,737,205	57.2
Paper and paper products	405,790	1.4
Drugs and sundries	561,385	1.9
Apparel and piece goods	275,764	0.9
Groceries	3,429,184	11.7
Farm product, raw materials	6,200,592	21.2
Chemicals	1,616,367	5.5
Petroleum products	1,964,092	6.7
Alcoholic beverages	372,772	1.3
Miscellaneous	1,911,259*	6.5

* Of the amount, $1,124,474, or 58.8 percent is farm supplies.

SOURCE: 1977 Census of Wholesale Trade.

initially low Christmas holiday sales appeared to belie any prompt consumer-led recovery. However, recent surveys of consumer confidence, robust late-December retail sales and decreasing interest rates provide some basis for expectations of improvement in trade nationally. Tennessee retail sales in 1983, adjusted for inflation, will increase by about 6 percent, with significant improvement by 1984. By 1984, along with gains in other areas, auto sales should provide a big boost with a forecast real increase in sales of 9.5 percent--or more than 16 percent in nominal terms. In both the next two years, though, growth in real output and employment in the Trade Sector will lag behind most economic sectors.

Long-term Forecast

The relatively modest growth forecast for the aggregate economy over the next decade will continue to dampen trade growth. Trade employment will not achieve 1979's peak levels of 389,000 jobs until after 1987, though gains will occur at an increasing rate every year after 1984. Growth in retail sales is projected to slow from a 3.4 percent gain in 1984 to 2.0 in 1985; increase steadily to an annual gain of 3.81 percent during 1988 and taper off thereafter. Rates of increase in retail sales measured by current dollars show a steady decline after 1984, in contrast to the cyclical pattern of real rates. This, of course, is the result of the declining rates of inflation forecast throughout the decade.

FINANCE, INSURANCE, AND REAL ESTATE

Following the usual practice in aggregate economic analysis, finance, insurance, and real estate (FIRE) are grouped into one sector for purposes of forecasting output, employment, and wages. In addition, the model forecasts certain balance sheet items for commercial banks and savings and loan institutions. This section summarizes the forecasts for the FIRE sector and gives the outlook for commercial banks and savings and loan institutions.

Short-term Forecast

The sector will certainly respond to the higher level of activity in the state as business investment rises, interest and mortgage rates moderate, and consumer spending rises. However, a "wait-and-see" attitude caused by the rapid fall in the inflation rate will delay dramatic growth in this sector as some major purchases are postponed in anticipation of relatively better future buys.

FIRE's output in current dollars will rise by a strong annual rate of 7.5 percent in the short term, with peak growth of 8.3 percent in 1984 (see Table 11). However, over half of this growth will be an illusion due to inflation. Output in 1972 dollars will rise by only 2.8 percent, with peak growth of 3.1 percent in 1984. In real (adjusting for inflation) terms, FIRE output will exhibit a smaller decline than gross state product (GSP) in 1982 (-3.0 percent versus -3.1 percent for GSP) and will grow at a slower rate in 1983 and 1984.

In contrast to the performance of FIRE's output growth, this sector's employment outlook is good. Both Tennessee and this sector

TABLE 11

TENNESSEE STATE AND FINANCE, INSURANCE, AND REAL ESTATE INDUSTRY SELECTED VARIABLES, 1982-1984

Variable	1982	1983	1984
Tennessee Gross State Product			
(Millions of current dollars)	53,193.0	57,574.0	63,561.0
Percent Change	4.00	8.23	10.40
FIRE Output			
(Millions of current dollars)	6,282.0	6,702.0	7,258.0
Percent Change	3.63	6.69	8.29
Tennessee Gross State Product			
(Millions of 1972 dollars)	26,433.1	27,168.7	28,277.5
Percent Change	-3.07	2.78	4.08
FIRE Output			
(Millions of 1972 dollars)	3,196.8	3,279.0	3,378.9
Percent Change	-2.96	2.57	3.05
Tennessee Employment			
(Thousands of persons)	1,876.2	1,895.0	1,920.0
Percent Change	-2.23	1.00	1.32
FIRE Employment			
(Thousands of jobs)	76.2	76.8	77.9
Percent Change	-2.42	0.76	1.51
FIRE Output Per Employee			
(Thousands of 1972 dollars)	41.9	42.7	43.4
Percent Change	-0.55	1.80	1.52
Average Annual Wages: All Sectors			
(1972 dollars)	7,194	7,257	7,383
Percent Change	-0.03	0.87	1.74
Average Annual Wages: FIRE			
(1972 dollars)	7,982	8,127	8,292
Percent Change	1.96	1.82	2.03
COMMERCIAL BANKS			
Total Loans			
(Millions of dollars)	14,994.0	16,415.0	17,685.0
Percent Change	10.25	9.47	7.74
Total Deposits			
(Millions of dollars)	22,708.0	23,981.0	25,728.0
Percent Change	7.34	5.61	7.28
Loan-To-Deposit Ratio			
(Percent)	66.0	68.5	68.7

SOURCE: Tennessee Econometric Model, December 1982 solution.

suffered employment losses in 1982, with FIRE's loss (2.4 percent) exceeding the state's (2.2 percent). Both state and FIRE employment will grow at increasing rates in the short term. However, FIRE's rate in 1984 (1.5 percent) will exceed that of the state (1.3 percent).

One partial explanation for this sector's relatively slow rate of output recovery can be found in FIRE's output per employee, that is, in its productivity. During 1982-1984, FIRE will suffer from sluggish growth in productivity relative to the state. For instance, Tennessee's productivity will grow at a 2.7 percent annual average rate, while FIRE's will rise by only 1.8 percent per year. FIRE's sluggishness may be a consequence of, in part, its decline in output per employee of nearly 1 percent per year over 1978-1982. Despite the above, this sector's productivity will still be nearly three times that of the statewide average.

Increased business investment and consumer spending during the short term will apparently benefit the annual wages of FIRE workers more than the wages of others. This sector's wages will grow at a real annual average rate of 1.9 percent, while the statewide average growth will be only 1.3 percent. In addition, while all sectors suffered a net average decline in wages during 1982, FIRE wages grew by nearly 2.0 percent. Higher growth rates applied to higher average annual salaries ($8,292 per worker in FIRE versus $7,383 per worker across the state in 1984) means that the relative wage advantage of this sector's workers will continue to grow.

The period 1982-1984 will give commercial banks as much mediocre news as good news. Total deposits will grow steadily from $22,708 million in 1982 to $25,728 million in 1984. However, this translates

into an average annual growth rate of only 6.4 percent. Total loans grew by a healthy 10.25 percent in 1982 and will grow by 9.5 percent in 1983. These relatively high rates are due to the moderation of interest and mortgage rates. However, the short-term trend is for a constantly declining rate of loan growth from year to year. During 1984, loans will grow at only 7.7 percent. Despite the weakening performance of loans in 1984, the loan-to-deposit ratio will climb steadily from 66.0 percent in 1982 to 68.7 percent in 1984. This increased loan demand will be due, in part, to increased auto sales and lower interest rates. However, these lower interest rates will reduce the average yield on loans by over four percentage points, from 15.0 percent in 1982 to 10.9 percent in 1984.

The experience of savings and loan (S&L) institutions will contrast sharply with that of commercial banks in the short term. Whereas total loans for commercial banks will be rising at declining rates, loans for S&Ls will be responding to falling mortgage rates by growing at ever-increasing rates. In 1982, total S&L loans grew 7.6 percent to $6,999 million. By 1984, they will reach $8,430 million, having increased 10.5 percent in that year alone. In addition, the assets of S&Ls will not only rise each year but increase by ever greater increments. Assets grew by 6.8 percent to $8,209 million in 1982, will rise by 8.6 percent in 1983, and will increase by over 10 percent in 1984 to reach a level of $9,837 million.

Long-term Forecast

It was mentioned earlier that a "wait-and-see" attitude will dampen short-term growth in the FIRE sector. As seen in Table 12,

TABLE 12

TENNESSEE STATE AND FINANCE, INSURANCE, AND REAL ESTATE INDUSTRY SELECTED VARIABLES, 1985-1991, SELECTED YEARS

Variable	1985	1988	1991
Tennessee Gross State Product			
(Millions of 1972 dollars)	29,157.4	31,990.1	35,149.1
Percent Change from preceding year	3.11	3.44	3.61
FIRE Output			
(Millions of 1972 dollars)	3,483.9	3,948.9	4,490.9
Percent Change from preceding year	3.11	4.54	4.11
Tennessee Employment			
(Thousands of persons)	1,939.4	2,004.1	2,090.7
Percent Change from preceding year	1.01	1.35	1.52
FIRE Employment			
(Thousands of jobs)	79.3	86.3	94.4
Percent Change from preceding year	1.78	3.11	2.87
FIRE Output Per Employee			
(Thousands of 1972 dollars)	43.9	45.8	47.6
Percent Change from preceding year	1.30	1.39	1.20
Average Annual Wages: All Sectors			
(1972 dollars)	7,507	7,970	8,258
Percent Change from preceding year	1.68	2.03	0.78
Average Annual Wages: FIRE			
(1972 dollars)	8,462	9,084	9,520
Percent Change from preceding year	2.04	2.38	1.20
COMMERCIAL BANKS			
Total Loans			
(Millions of dollars)	19,207.0	24,816.0	31,852.0
Percent Change from preceding year	8.61	8.91	9.05
Total Deposits			
(Millions of dollars)	27,827.0	35,602.0	45,354.0
Percent Change from preceding year	8.16	8.59	8.79
Loan-To-Deposit Ratio			
(Percent)	69.0	69.7	70.2

SOURCE: Tennessee Econometric Model, December 1982 solution.

the fruits of increased business investment and consumer spending and lower mortgage and interest rates will be seen in the long term. FIRE real output will rise at an average annual rate of 4.3 percent in the long term. It will grow by only 2.8 percent during 1982-1984. In fact, every year's growth will exceed 3.05 percent, which was the short term's maximum growth. As usual, FIRE's real output increase will lag behind the rise in overall state activity. State real GSP growth rate will slow in 1988-1990, whereas FIRE real output growth rate will slow in 1990 and 1991.

The short-term phenomenon of FIRE employment increases exceeding overall state employment increases will become a strong trend in the long term. Tennessee employment will rise at an average annual rate of 1.3 percent, while FIRE jobs will rise by 2.9 percent. In fact, in every year between 1985 and 1991, FIRE's employment increases will be roughly double that of statewide employment growth.

In both the short term and the long term, FIRE real wages will grow at a faster rate than state real wages. Tennessee's average annual growth rate will be 1.6 percent, while FIRE real wages will grow at 2.0 percent. In fact, FIRE's real wage growth will exceed Tennessee's in every year through 1991. In addition, FIRE's growth rate in real wages will also be more robust than the state's in the long term. State real wages will begin growing at ever-diminishing rates in 1987. FIRE will resist this weakening by growing in 1989 at a rate greater than that in 1988. All of this means that, whereas FIRE's average annual wages were nearly 11 percent greater than the state's in 1981, they will be over 15 percent higher in 1991.

In general, the long term will treat commercial banks better than will the short term. Total deposits will grow steadily at an average 8.5 percent per year, dropping below 8.2 percent only one year. This contrasts with short-term average growth of 6.4 percent. In addition, total loans will rise at an average 8.8 percent, following a stable path in which the growth rate will fall between 8 percent and 9 percent virtually every year. The long term will see the end of the decline in growth rates which will begin in the short term. The combination of strong performances by loans and deposits and falling interest rates will signal ever-stronger loan demand. The loan-to-deposit ratio will climb steadily every year, reaching 70.2 percent by 1991. However, these declining interest rates will lower the average yield on loans to 9.1 percent by 1991.

The long term will see an extension of the short-term experience of savings and loan institutions. Responding to continuously falling mortgage rates, total loans at the state's savings and loan associations will grow at an average annual rate of 10.5 percent, reaching approximately $17,000 million in 1991. In addition, total assets will grow at roughly the same rate as loans (10.4 percent) and will be over $19,500 million by 1991.

TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES

In Tennessee, most output and employment in transportation, communications, and public utilities is attributable to trucking and warehousing, railroading, and telephone services. Air, barge, and bus transport are not important sources of employment and contribute relatively small amounts to total output. The state has rela-

tively few private utility workers, who are also a part of this industry group, because a great deal of electricity and gas distribution in Tennessee is carried out by municipalities. Consequently, most public utility employees are included in the government sector. Since trucking and warehousing account for 39.2 percent of all employment, and communications, 28.6 percent, future growth of this sector is heavily tied to the prospects for these two industries in Tennessee.

The forecast, as shown in Table 13, calls for sectoral output to grow at an annual rate that is slightly higher than for the state economy as a whole (a 3.59 percent annual rate versus a 3.21 percent

TABLE 13

FORECASTS OF OUTPUT AND EMPLOYMENT--
TRANSPORTATION, COMMUNICATIONS, AND
PUBLIC UTILITIES IN TENNESSEE

Year	Output (In millions of 1972 dollars)	Annual Percent Change	Employment (Thousands)	Annual Percent Change
1982	$2,152.2	-3.47	82.8	-3.29
1983	2,218.5	3.08	83.4	0.78
1984	2,301.4	3.74	84.3	1.09
1985	2,391.3	3.91	85.4	1.28
1986	2,477.1	3.59	86.5	1.32
1987	2,569.5	3.73	87.7	1.37
1988	2,665.1	3.72	88.9	1.39
1989	2,762.0	3.64	90.2	1.38
1990	2,854.2	3.34	91.4	1.33
1991	2,956.3	3.58	92.6	1.34

SOURCE: Tennessee Econometric Model, December 1982 solution.

rate for gross state product over the 1982-1991 period). Employment is expected to increase at about the same rate as total nonagricultural employment (1.25 percent versus 1.42 percent for total nonagricultural jobs).

What could significantly change this forecast is the long-run impact of the deregulation of the transportaton and communications industries and the rapid introduction of new technologies in the field of telecommunications. Passed by Congress in 1980, the Motor Carrier Act eased entry requirements and partially deregulated freight rates in the trucking industry. In addition, the recently passed federal bill increasing fuel taxes also overrode the remaining state restrictions on the size and weight of truck trailers. These regulatory changes, when taken together, could substantially improve productivity in the industry, lower costs, and foster a more rapid increase in output than is presently being forecast. Railroad freight rates were also partially deregulated in 1980 with the passage of the Staggers Rail Act. The bill also made it easier for railroads to merge with each other and to abandon unprofitable services. The recent approval of the merger of the Norfolk and Western and the Southern railroads and the proposal by L&N to abandon services in several Middle Tennessee counties could also have a significant long-run effect on sectoral output by affecting the long-run growth of railroads in the state. Finally, the impending break-up of the American Telephone and Telegraph Company and the deregulation by the Federal Communications Commission of major components of the broadcasting and data transmission industries could also considerably change the forecast. The introduction of new technology in fields

such as direct satellite broadcasting could also alter the long-run growth of jobs and output in this sector.

In summary, the forecast appearing in Table 13 is probably conservative for both the short and long term. Given the recent major shifts in the regulatory climate and rapid technological change on the horizon, it is difficult to determine the future course of this sector with any certainty. If anything, it will likely become more, rather than less, important to the state's economy over the next nine years.

ENERGY

After a decade of radical changes in the energy sector, the growth of prices and consumption of most primary energy sources appear to be stabilizing. No price shocks occurred in 1982, and, while they are still possible, external price shocks such as those imposed by the 1973-74 Arab oil embargo are less likely now than in the past for several reasons. First, the world and national recessions have softened the demand for energy, particularly oil. This has left exporting oil countries scrambling to find buyers. Second, the use of coal and uranium have begun to supplant the use of oil and fuel oil in both industrial uses and in electricity generation. Finally, increased oil supplies from the North Sea and Mexico, together with the oil accumulated in the Strategic Petroleum Reserve, have reduced this country's vulnerability to an OPEC boycott.

During 1982 consumption of electricity, natural gas, coal, gasoline, and fuel oil all declined. Because each of these energy sources is an input into industrial, commercial, or residential economic

activity, the reduced consumption in 1982 largely reflects reduced activity in these sectors. In addition, real price increases in electricity and natural gas contributed to soft demand for these energy sources. Finally, increased efficiency of energy use through additional home insulation, car-pooling, and higher-miles-per-gallon automobiles have retarded the growth of energy demand.

Short-term Forecast

Real prices of electricity, coal, and natural gas will rise during 1983-84, however, by less than the increases of recent years. The average price of electricity in Tennessee will rise from around 4.75 cents per kilowatt hour (kwh) in 1982 to almost 5.4 cents per kwh in 1984. This represents an annual increase of 6.35 percent, compared to 17 percent for the 1977-1981 period. The average price of a ton of coal in Tennessee will rise from around $43 in 1982 to almost $50 in 1984, an average annual increase of about 8 percent. After accounting for inflation, this represents only a real increase in the 1 to 2 percent range. The slow growth in coal prices during 1983-84 is likely to be attributable to easing wage demands as the overall inflation rate falls, an abundant supply, and slow growth in demand due to the slow increase in industrial activity. Natural gas prices in Tennessee are expected to increase moderately (around 15 percent) in 1983-84. The price increases of natural gas during 1983-84 will come largely from consumers bidding up the price of that portion of natural gas supplies that do not have regulated prices, as prescribed by the Natural Gas Policy Act of 1978. Under this Act a small amount of natural gas was deregulated, while some 20

categories of gas were created, each with different regulated prices.

The combination of higher prices, slow economic recovery, and increased efficiency of energy use will result in very slow growth in energy consumption during 1983-84. Total electricity consumption in kilowatt hours will rise during 1983-84 by 3 percent annually, after declining by 1.12 percent in 1982. Within the electricity sector, the largest consumption gains will come in 1984 from the commercial and industrial sectors as overall economic activity accelerates. The demand for coal will grow slowly (0.94 percent) in 1983 and then more rapidly (2.68 percent) in 1984. The combination of moderate price increases and slow economic growth will lead to only slight growth, if any, in natural gas demand during 1983-84. Total natural gas consumption in Tennessee will increase in 1983-84 from its current level of 2,076 million therms to 2,094 million therms--less than a 1 percent increase. After an absolute decline of 1 percent in gasoline demand during 1982, consumption should increase (around 1 percent) during 1983-84, although much more slowly than in previous years.

Long-term Forecast

Because of the many uncertainties regarding domestic energy regulations, international politics, and possible technological breakthroughs, predicting the long-term growth path of energy prices and consumption is quite difficult. Nevertheless, the whirlwind of changes in the energy sector that have occurred during the past decade do appear now to be providing some long-term trends and changes that are worthy of mention. First, the growth of electricity consumption

during the next decade will average around 2 percent per year. This is dramatically different from the 7 percent annual consumption growth rate in the 1960's, and significantly lower than the 3 percent annual consumption growth rate of the 1970's. Second, because coal is an abundant natural resource whose ownership structure is widely dispersed, coal prices will rise only very modestly during the decade of the 1980's. Most of whatever price increases do occur will come from electric utilities bidding up the price of low-sulphur coal. Finally, more efficient automobiles and a fuel-conscious public will bring down the rate of growth of gasoline demand in Tennessee to around 1 percent for the 1980's (compared with 3.6 percent for 1972-78). Still left in the whirlwind of uncertainty in the energy sector is the long-run outlook for prices and consumption of natural gas. Currently, the price of a large portion of natural gas supplies is scheduled to be deregulated in 1985, with a smaller portion scheduled for deregulation in 1987. If this time frame is brought forward, as the Reagan Administration desires, natural gas prices will escalate more quickly than forecast here. Furthermore, the degree to which prices will rise upon deregulation is very uncertain and is made very difficult to determine because of the complicated regulatory structure currently in place.

GOVERNMENT

In the last decade the government sector grew dramatically, and the outlook for the growth of this sector in Tennessee has changed just as dramatically over the past two years. After a long period

of stability, federal government employment increased from 52,000 to 76,700 between 1973 and 1980. The main reason for this increase was the start-up of TVA's ambitious nuclear plant construction program in the state. However, since 1979 lower power demand forecasts have led the TVA Board to defer the construction of eight of these nuclear units, leading to substantial layoffs of TVA construction personnel. Consequently, federal employment is expected to decline about 14 percent to 65,900 in 1984.

At the same time, the long-term growth trend of state and local government employment also abruptly shifted downward. State revenue expansion, which had been averaging 13 percent a year, grew at only a 5.4 percent annual compound rate between 1980 and 1982 (see Table 14). Similarly, the annual growth of local revenues slowed from 11.0 percent to 9.1 percent. This slowdown was primarily caused by the drastic drop in the year-to-year growth of federal intergovernmental assistance. In the case of the state, federal aid grew 1.6 percent a year during 1980-82--one-tenth the rate of the previous four-year period. As can be seen in Table 14, federal aid to local governments declined in absolute terms after fiscal year 1980. At the same time there was an abrupt slowdown in the growth of state assistance to local governments. Between 1976 and 1980, this grew at a 10.2 percent annual rate, and after 1980, at a rate of only 3 percent. This fall-off in the expansion of intergovernmental aid has put more pressure on local own-source revenues. Local governments increased revenue collections from local sources at a 13.8 percent annual rate after 1980--somewhat more than the 11.3 annual rate of the previous four-year period. Most of this increase came from higher property tax rates enacted during fiscal years 1979 and 1980.

TABLE 14

HISTORICAL GROWTH OF TENNESSEE STATE AND LOCAL GOVERNMENT EXPENDITURES:
FY 1972-1982
(In Millions of Current Dollars)

Fiscal Year	State Revenues			Local Revenues			
	Total	Own Source	Federal Aid	Total	Own Source	State Aid	Federal Aid
1972	$1,364.0	$ 979.7	$ 384.3	$1,379.0	$ 830.0	$ 451.8	$ 97.2
1976	2,105.0	1,442.3	662.7	2,177.9	1,283.2	648.8	245.9
Annual Compounded Percent Change 1972-1976	11.5	10.2	14.6	12.1	11.5	9.5	26.1
1980	3,426.2	2,215.6	1,210.6	3,308.7	1,971.4	958.2	379.1
Annual Compounded Percent Change 1976-1980	13.0	11.3	16.3	11.0	11.3	10.2	11.4
1982	3,808.2	2,559.6	1,248.6	3,934.7	2,551.4	1,016.4	366.9
Annual Compounded Percent Change 1980-1982	5.4	7.5	1.6	9.1	13.8	3.0	-1.6

SOURCE: Tennessee Econometric Model, Historical Data and December 1982 solution.

The recessions of 1980 and 1981-82 also contributed to lowering the growth of state and local revenues. Since the Tennessee tax system is so dependent on ad valorem sales taxes, the decline in inflation accompanying the present recession directly translated into the slower year-to-year growth of tax collections. However, this lower rate of inflation acts as a "double-edged sword." It will probably lead to lower expenditure growth as well as lower revenue growth in the future because cost-of-living increases and other annual cost adjustments need not be as large each year. Hence state and local government's own-source tax revenues may continue to buy as much in real terms as they have in the past. However, their total budgets will still be smaller in real dollars because of the fall-off in federal intergovernmental aid. The recent shift in federal priorities away from domestic programs toward defense spending and tax relief has led to a major lowering of the forecast for the future growth of the government sector.

As shown in Table 15, it is not expected that employment in state and local government will grow at all during the next nine years. For the past two years this sector experienced job losses at rates three times greater than for the rest of the nonagricultural portion of the economy. For the next four years annual job losses are forecast to continue, while employment in the rest of the state's economy is expected to increase. Hence, the importance of the public sector as a source of jobs and income is also anticipated to decline. This sector's share of all nonagricultural jobs is forecast to fall from 14 percent in 1980 to 11.5 percent in 1990. By contrast, the public sector has grown in importance over the past ten years, so this

TABLE 15

HISTORICAL AND PROJECTED GROWTH OF STATE AND LOCAL GOVERNMENT EMPLOYMENT IN TENNESSEE COMPARED TO TOTAL NONAGRICULTURAL EMPLOYMENT
(Employment in Thousands)

Year	State and Local Government Employment	Total Nonagricultural Employment
1972	188.9	1,450.1
1976	222.1	1,577.4
Annual Compounded Percent Change 1976-1976	4.1	2.1
1980	240.5	1,747.2
Annual Compounded Percent Change 1976-1980	2.0	2.6
1982	228.5	1,714.6
Annual Compounded Percent Change 1980-82	-2.5	-0.9
1986	220.3	1,795.0
Annual Compounded Percent Change 1982-1986	-0.9	1.2
1990	220.1	1,912.7
Annual Compunded Percent Change 1986-1990	-0.0	1.6

SOURCE: Tennessee Econometric Model, Historical Data and December 1982 solution.

forecast indicates a major change in the long-run growth trend of government in Tennessee. This new trend is likely to come about unless there is a major shift in priorities at the federal level or a substantial restructuring of the state's tax system in the future.

Table 16 provides a look at the makeup of state and local government employment both in Tennessee and nationally in 1977. These data are expressed as the number of employees per 10,000 population for each major government function. By this measure, Tennessee had more state and local government employees per capita than the national average in that year (512 per 10,000 people versus 489.5 per 10,000 nationally). However, most of this difference can be explained by the fact that a higher proportion of electric and gas, public health and hospital, and refuse collection services were in the public rather than the private sector in Tennessee. In most cases, these types of services are dependent on fees rather than general revenues and will not be affected by the slowdown in revenue growth. On the other hand, services that depend on the expansion of general revenues, such as public schools, higher education, police, and welfare had fewer employees per capita than the national average. When one subtracts the differences caused by more public ownership of various fee-for-service government functions, Tennessee's public sector employment was actually smaller than the national average in 1977. It is the services and functions supported primarily from general tax revenues that will bear the brunt of future projected cutbacks.

Given present trends, fewer man-days will be available to provide educational, law enforcement, and other government services in the future. More efficient government operation may maintain existing

TABLE 16

STATE AND LOCAL GOVERNMENT EMPLOYMENT
PER 10,000 POPULATION IN TENNESSEE
AND THE U.S.: 1977

Function	Tennessee Full-Time Equivalent Employees	Tennessee Employees Per 10,000 Population	U.S. Employees Per 10,000 Population
Public Higher Education	19,671	45.9	50.7
Local Public Schools	75,158	175.2	182.6
Libraries	972	2.3	3.0
Other Public Education	2,981	6.9	4.0
Welfare	6,454	15.0	16.5
Public Hospitals	27,585	64.3	48.1
Public Health	4,608	10.7	9.2
Highways	13,217	30.8	25.3
Police	9,674	22.6	26.2
Fire	5,220	12.2	9.9
Correction	4,244	9.9	10.0
Natural Resources	4,468	10.4	8.3
Recreation	3,029	7.1	7.3
Sewerage	1,762	4.1	3.8
Refuse Collection	4,082	9.5	5.7
Water Supply	2,867	6.7	5.3
Electric Supply	5,577	13.0	2.8
Gas Supply	1,567	3.7	0.5
Transit	466	1.1	5.8
Other	23,186	25.6	25.1
Public Housing	2,872	6.7	3.9
Total	219,660	512.0	489.5

SOURCE: 1977 Census of Governments.

levels of service in some cases, but it is unlikely that efficiency improvements can offset all of the expected losses of manpower that are likely to occur in the future, especially in "person-to-person" services such as classroom instruction, social work, and counseling.

APPENDIX I

FORECAST DATA

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 1: TENNESSEE SELECTED INDICATORS

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	TN GROSS STATE PRODUCT (MIL. DOL.)	53193.	57574.	63561.	69797.	76117.	83216.	90096.	97168.	104315.	112867.
2	PERCENTAGE CHANGE	4.00	8.23	10.40	9.81	9.05	9.33	8.27	7.85	7.36	8.20
3											
4	TN GROSS STATE PRODUCT (MIL 72 $)	26433.1	27168.7	28277.5	29157.4	29853.6	30927.0	31990.1	33034.6	33924.7	35149.1
5	PERCENTAGE CHANGE	-3.07	2.78	4.08	3.11	2.39	3.60	3.44	3.27	2.69	3.61
6											
7	US GROSS NATIONAL PRODUCT (BIL 72 $)	1480.0	1527.7	1604.3	1663.4	1695.5	1756.6	1814.5	1862.9	1899.0	1966.7
8	PERCENTAGE CHANGE	-1.50	3.22	5.01	3.68	1.93	3.60	3.30	2.67	1.94	3.57
9											
10	TN PERSONAL INCOME (MIL. DOL.)	41280.	44591.	48435.	53016.	57767.	62910.	68024.	73279.	78657.	84817.
11	PERCENTAGE CHANGE	5.96	8.02	8.62	9.46	8.96	8.90	8.13	7.73	7.34	7.83
12											
13	TN PERSONAL INCOME (MIL 72 $)	20107.3	20529.8	20958.5	21446.7	21948.1	22670.4	23448.3	24152.6	24852.0	25508.8
14	PERCENTAGE CHANGE	0.39	2.10	2.09	2.33	2.34	3.29	3.43	3.00	2.90	2.64
15											
16	US PERSONAL INCOME (BIL 72 $)	1251.3	1283.1	1322.4	1360.4	1392.1	1446.1	1494.0	1529.3	1559.6	1598.5
17	PERCENTAGE CHANGE	0.75	2.54	3.06	2.88	2.33	3.88	3.31	2.37	1.98	2.50
18											
19	TN EMPLOYED PERSONS (THOUS)	1876.2	1895.0	1920.0	1939.4	1954.8	1977.5	2004.1	2032.9	2059.5	2090.7
20	PERCENTAGE CHANGE	-2.23	1.00	1.32	1.01	0.79	1.16	1.35	1.44	1.31	1.52
21											
22	US EMPLOYED PERSONS (MIL)	100.3	101.5	104.5	106.9	108.0	110.1	112.1	113.9	115.1	117.3
23	PERCENTAGE CHANGE	-0.14	1.21	2.97	2.32	0.99	1.95	1.84	1.61	1.07	1.90
24											
25	TN UNEMPLOYMENT RATE	11.5	11.4	10.6	9.8	9.4	8.4	7.4	6.7	6.3	5.8
26											
27	US UNEMPLOYMENT RATE	9.6	9.7	8.9	8.1	8.3	7.8	7.3	7.0	6.8	6.3
28											
29	IMPLICIT DEFLATOR, GSP	201.2	211.9	224.8	239.4	255.0	269.1	281.6	294.1	307.5	321.1
30	PERCENTAGE CHANGE	7.29	5.30	6.07	6.50	6.51	5.53	4.67	4.44	4.54	4.43
31											
32	IMPLICIT DEFLATOR, GNP	207.4	219.6	233.3	249.2	265.9	281.5	295.4	309.2	323.7	339.1
33	PERCENTAGE CHANGE	6.08	5.88	6.24	6.82	6.70	5.87	4.94	4.67	4.69	4.76
34											
35	TN MFG OUTPUT / EMPLOYEE (THOUS 72 $)	19.6	20.1	20.9	21.3	21.5	22.1	22.6	23.0	23.3	24.0
36	PERCENTAGE CHANGE	-0.45	2.89	3.64	2.27	0.88	2.76	2.10	1.84	1.16	3.11
37											
38	US MFG OUTPUT / EMPLOYEE (THOUS 72 $)	17.8	18.6	19.3	19.8	20.1	20.7	21.3	21.9	22.2	22.9
39	PERCENTAGE CHANGE	0.14	4.13	3.74	2.96	1.51	3.01	2.83	2.75	1.52	2.77
40											
41	TN PER CAPITA INCOME ($)	8910.	9558.	10318.	11217.	12077.	13016.	13915.	14790.	15671.	16694.
42	PERCENTAGE CHANGE	5.48	7.28	7.95	8.72	7.66	7.77	6.91	6.29	5.95	6.53
43											
44	TN POPULATION (THOUS.)	4633.	4665.	4694.	4726.	4783.	4833.	4889.	4955.	5019.	5081.
45	PERCENTAGE CHANGE	0.46	0.69	0.63	0.68	1.21	1.05	1.14	1.35	1.31	1.22

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 2: TENNESSEE GROSS STATE PRODUCT BY SECTOR (MILLIONS OF DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	GROSS STATE PRODUCT	53193.	57574.	63561.	69797.	76117.	83216.	90096.	97168.	104315.	112867.
2	PERCENTAGE CHANGE	4.00	8.23	10.40	9.81	9.05	9.33	8.27	7.85	7.36	8.20
3											
4	MANUFACTURING	17557.	19084.	21299.	23411.	25154.	27358.	29250.	31024.	32609.	35110.
5	PERCENTAGE CHANGE	-0.26	8.70	11.61	9.92	7.45	8.76	6.92	6.07	5.11	7.67
6											
7	DURABLE GOODS	7521.	8184.	9339.	10400.	11122.	12205.	13148.	13996.	14635.	15832.
8	PERCENTAGE CHANGE	-2.25	8.82	14.10	11.37	6.94	9.73	7.72	6.45	4.57	8.17
9											
10	NONDURABLE GOODS	10036.	10900.	11961.	13011.	14032.	15153.	16102.	17029.	17973.	19279.
11	PERCENTAGE CHANGE	1.28	8.61	9.73	8.78	7.85	7.99	6.27	5.75	5.54	7.26
12											
13	CONSTRUCTION	2269.	2634.	3035.	3441.	3752.	4301.	4801.	5205.	5506.	5994.
14	PERCENTAGE CHANGE	18.59	16.10	15.22	13.39	9.02	14.64	11.60	8.43	5.78	8.86
15											
16	MINING	805.	958.	1090.	1270.	1473.	1686.	1827.	1962.	2154.	2318.
17	PERCENTAGE CHANGE	18.22	19.06	13.79	16.53	15.97	14.48	8.34	7.40	9.77	7.63
18											
19	TRADE	8228.	8807.	9778.	10748.	11990.	13153.	14456.	15949.	17646.	19411.
20	PERCENTAGE CHANGE	3.53	7.04	11.03	9.92	11.55	9.70	9.91	10.32	10.64	10.00
21											
22	SERVICES	6481.	6963.	7612.	8275.	8961.	9670.	10473.	11384.	12345.	13347.
23	PERCENTAGE CHANGE	10.28	7.44	9.33	8.71	8.29	7.91	8.30	8.70	8.44	8.12
24											
25	FINANCE, INSURANCE & REAL ESTATE	6282.	6702.	7258.	7867.	8582.	9319.	10157.	11114.	12078.	13082.
26	PERCENTAGE CHANGE	3.63	6.69	8.29	8.39	9.10	8.59	8.99	9.43	8.67	8.31
27											
28	TRANS., COMM. & PUBLIC UTILITIES	4284.	4682.	5165.	5748.	6402.	7139.	7758.	8368.	9008.	9742.
29	PERCENTAGE CHANGE	4.26	9.27	10.32	11.30	11.38	11.51	8.67	7.86	7.66	8.15
30											
31	GOVERNMENT	6214.	6610.	7105.	7740.	8430.	9157.	9876.	10587.	11306.	12100.
32	PERCENTAGE CHANGE	3.94	6.37	7.49	8.94	8.92	8.61	7.85	7.20	6.80	7.02
33											
34	FEDERAL	2305.	2451.	2636.	2875.	3147.	3430.	3706.	3993.	4293.	4639.
35	PERCENTAGE CHANGE	-2.20	6.32	7.53	9.10	9.44	8.98	8.07	7.74	7.52	8.04
36											
37	STATE & LOCAL	3909.	4159.	4469.	4865.	5284.	5727.	6169.	6593.	7013.	7461.
38	PERCENTAGE CHANGE	7.93	6.39	7.46	8.85	8.61	8.39	7.72	6.87	6.36	6.40
39											
40	AGRICULTURE	1073.	1134.	1219.	1296.	1371.	1433.	1499.	1574.	1663.	1761.
41	PERCENTAGE CHANGE	9.85	5.60	7.52	6.30	5.85	4.48	4.62	5.01	5.61	5.92
42											
43	PER CAPITA GROSS STATE PRODUCT ($)	11481.	12341.	13540.	14768.	15913.	17217.	18430.	19612.	20783.	22215.
44	PERCENTAGE CHANGE	3.52	7.49	9.71	9.07	7.75	8.19	7.04	6.41	5.97	6.89

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 3: TENNESSEE DURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	TOTAL DURABLE GOODS	7521.	8184.	9339.	10400.	11122.	12205.	13148.	13996.	14635.	15832.
2	PERCENTAGE CHANGE	-2.25	8.82	14.10	11.37	6.94	9.73	7.72	6.45	4.57	8.17
3											
4	LUMBER AND WOOD PRODUCTS	279.	330.	384.	434.	453.	502.	558.	584.	600.	663.
5	PERCENTAGE CHANGE	-6.68	18.13	16.41	13.07	4.36	10.96	11.09	4.64	2.81	10.51
6											
7	FURNITURE AND FIXTURES	433.	460.	516.	569.	605.	656.	705.	745.	784.	843.
8	PERCENTAGE CHANGE	1.42	6.29	12.31	10.17	6.30	8.43	7.52	5.72	5.23	7.47
9											
10	STONE, CLAY AND GLASS	628.	664.	740.	828.	876.	966.	1054.	1126.	1171.	1279.
11	PERCENTAGE CHANGE	7.14	5.59	11.55	11.85	5.85	10.27	9.06	6.80	4.01	9.28
12											
13	PRIMARY METALS	738.	797.	901.	1030.	1115.	1252.	1364.	1494.	1590.	1722.
14	PERCENTAGE CHANGE	-4.56	8.01	13.12	14.32	8.23	12.29	8.92	9.52	6.42	8.34
15											
16	FABRICATED METAL PRODUCTS	1069.	1148.	1319.	1498.	1633.	1828.	2002.	2146.	2260.	2478.
17	PERCENTAGE CHANGE	-7.38	7.40	14.97	13.54	8.97	12.00	9.52	7.18	5.30	9.63
18											
19	NONELECTRICAL MACHINERY	1527.	1617.	1858.	2047.	2178.	2349.	2489.	2638.	2709.	2886.
20	PERCENTAGE CHANGE	-1.46	5.84	14.94	10.16	6.40	7.85	5.96	6.01	2.69	6.52
21											
22	ELECTRICAL MACHINERY	1375.	1547.	1773.	1953.	2077.	2248.	2388.	2507.	2606.	2787.
23	PERCENTAGE CHANGE	-6.67	12.51	14.63	10.17	6.33	8.28	6.21	4.99	3.95	6.94
24											
25	TRANSPORTATION EQUIPMENT	990.	1101.	1265.	1419.	1522.	1687.	1830.	1960.	2085.	2294.
26	PERCENTAGE CHANGE	-0.79	11.15	14.88	12.20	7.29	10.80	8.53	7.10	6.35	10.02
27											
28	OTHER DURABLE GOODS	482.	523.	582.	622.	664.	716.	757.	795.	830.	879.
29	PERCENTAGE CHANGE	11.07	8.43	11.30	6.91	6.70	7.80	5.72	4.99	4.43	5.94
30											

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 4: TENNESSEE NONDURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF DOLLARS)

#	DESCRIPTION	1982	1983	1984	FORECAST DATA 1985	1986	1987	1988	1989	1990	1991
1	NONDURABLE GOODS	10036.	10900.	11961.	13011.	14032.	15153.	16102.	17029.	17973.	19279.
2	PERCENTAGE CHANGE	1.28	8.61	9.73	8.78	7.85	7.99	6.27	5.75	5.54	7.26
3											
4	FOOD	1869.	2004.	2137.	2274.	2417.	2573.	2708.	2823.	2949.	3094.
5	PERCENTAGE CHANGE	4.87	7.22	6.62	6.39	6.29	6.46	5.26	4.23	4.47	4.93
6											
7	TEXTILES	509.	565.	614.	674.	726.	787.	837.	881.	929.	995.
8	PERCENTAGE CHANGE	-1.59	11.00	8.70	9.71	7.69	8.48	6.26	5.29	5.44	7.16
9											
10	APPAREL	1210.	1336.	1488.	1585.	1693.	1818.	1928.	2034.	2143.	2266.
11	PERCENTAGE CHANGE	6.68	10.48	11.37	6.46	6.83	7.42	6.06	5.47	5.34	5.78
12											
13	PAPER	899.	964.	1062.	1180.	1298.	1398.	1480.	1569.	1671.	1803.
14	PERCENTAGE CHANGE	7.37	7.24	10.22	11.03	10.04	7.70	5.89	5.97	6.55	7.88
15											
16	PRINTING AND PUBLISHING	822.	887.	954.	1052.	1155.	1266.	1380.	1491.	1614.	1750.
17	PERCENTAGE CHANGE	5.69	7.95	7.60	10.21	9.84	9.60	8.97	8.08	8.25	8.39
18											
19	CHEMICALS	3162.	3458.	3833.	4184.	4505.	4858.	5140.	5442.	5704.	6190.
20	PERCENTAGE CHANGE	-1.72	9.35	10.85	9.16	7.67	7.84	5.81	5.88	4.82	8.51
21											
22	RUBBER AND PLASTICS	928.	1021.	1155.	1272.	1369.	1495.	1600.	1693.	1788.	1918.
23	PERCENTAGE CHANGE	-2.76	10.04	13.13	10.14	7.63	9.17	7.00	5.81	5.60	7.32
24											
25	OTHER NONDURABLE GOODS	638.	665.	716.	791.	869.	957.	1029.	1097.	1175.	1262.
26	PERCENTAGE CHANGE	-7.53	4.20	7.79	10.47	9.86	10.10	7.52	6.54	7.18	7.39

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 5: TENNESSEE GROSS STATE PRODUCT BY SECTOR (MILLIONS OF 1972 DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	GROSS STATE PRODUCT	26433.1	27168.7	28277.5	29157.4	29853.6	30927.0	31990.1	33034.6	33924.7	35149.1
2	PERCENTAGE CHANGE	-3.07	2.78	4.08	3.11	2.39	3.60	3.44	3.27	2.69	3.61
3											
4	MANUFACTURING	9393.3	9777.0	10411.3	10843.8	11012.9	11443.4	11802.3	12123.0	12297.9	12819.4
5	PERCENTAGE CHANGE	-5.74	4.08	6.49	4.15	1.56	3.91	3.14	2.72	1.44	4.24
6											
7	DURABLE GOODS	3987.3	4141.6	4506.0	4743.8	4780.3	4983.1	5147.3	5275.2	5297.7	5523.1
8	PERCENTAGE CHANGE	-7.27	3.87	8.80	5.28	0.77	4.24	3.30	2.48	0.43	4.25
9											
10	NONDURABLE GOODS	5406.1	5635.4	5905.3	6100.1	6232.6	6460.4	6655.0	6847.8	7000.2	7296.3
11	PERCENTAGE CHANGE	-4.59	4.24	4.79	3.30	2.17	3.65	3.01	2.90	2.23	4.23
12											
13	CONSTRUCTION	865.3	915.9	964.4	994.6	1004.0	1053.0	1085.8	1112.0	1124.4	1148.1
14	PERCENTAGE CHANGE	10.63	5.85	5.30	3.13	0.94	4.88	3.12	2.41	1.12	2.10
15											
16	MINING	137.0	144.7	147.7	150.7	151.2	149.2	149.8	150.2	154.6	155.1
17	PERCENTAGE CHANGE	14.80	5.57	2.09	2.06	0.33	-1.32	0.37	0.29	2.92	0.34
18											
19	TRADE	4027.3	4092.5	4244.0	4376.3	4576.3	4795.1	5049.4	5323.3	5603.8	5866.2
20	PERCENTAGE CHANGE	-4.35	1.62	3.70	3.12	4.57	4.78	5.30	5.43	5.27	4.68
21											
22	SERVICES	3035.6	3119.6	3202.5	3277.4	3352.6	3452.4	3558.6	3657.1	3753.5	3845.4
23	PERCENTAGE CHANGE	1.60	2.77	2.66	2.34	2.29	2.98	3.08	2.77	2.64	2.45
24											
25	FINANCE, INSURANCE & REAL ESTATE	3196.8	3279.0	3378.9	3483.9	3622.7	3777.4	3948.9	4131.7	4313.6	4490.9
26	PERCENTAGE CHANGE	-2.96	2.57	3.05	3.11	3.98	4.27	4.54	4.63	4.40	4.11
27											
28	TRANS., COMM. & PUBLIC UTILITIES	2152.2	2218.5	2301.4	2391.3	2477.1	2569.5	2665.1	2762.0	2854.2	2956.3
29	PERCENTAGE CHANGE	-3.47	3.08	3.74	3.91	3.59	3.73	3.72	3.64	3.34	3.58
30											
31	GOVERNMENT	3104.6	3092.5	3092.1	3097.8	3108.7	3133.7	3172.3	3212.1	3254.1	3292.1
32	PERCENTAGE CHANGE	-2.57	-0.39	-0.01	0.19	0.35	0.80	1.23	1.25	1.31	1.17
33											
34	FEDERAL	1184.7	1180.3	1181.1	1185.5	1195.6	1209.6	1227.1	1248.9	1273.8	1300.8
35	PERCENTAGE CHANGE	-8.17	-0.38	0.07	0.37	0.86	1.16	1.45	1.77	2.00	2.12
36											
37	STATE & LOCAL	1919.8	1912.2	1911.0	1912.3	1913.1	1924.1	1945.1	1963.2	1980.3	1991.2
38	PERCENTAGE CHANGE	1.24	-0.40	-0.06	0.07	0.04	0.57	1.09	0.93	0.87	0.55
39											
40	AGRICULTURE	521.1	529.2	535.2	541.5	548.1	553.3	557.8	563.1	568.6	575.6
41	PERCENTAGE CHANGE	5.26	1.54	1.14	1.18	1.21	0.94	0.83	0.95	0.97	1.23
42											
43	PER CAPITA GROSS STATE PRODUCT ($)	5705.	5824.	6024.	6169.	6241.	6399.	6544.	6668.	6759.	6918.
44	PERCENTAGE CHANGE	-3.52	2.08	3.43	2.41	1.17	2.52	2.27	1.89	1.37	2.36

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 6: TENNESSEE DURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF 1972 DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	TOTAL DURABLE GOODS	3987.3	4141.6	4506.0	4743.8	4780.3	4983.1	5147.3	5275.2	5297.7	5523.1
2	PERCENTAGE CHANGE	-7.27	3.87	8.80	5.28	0.77	4.24	3.30	2.48	0.43	4.25
3											
4	LUMBER AND WOOD PRODUCTS	177.9	197.4	215.3	226.1	219.5	229.0	239.8	239.9	234.7	246.7
5	PERCENTAGE CHANGE	-2.87	10.98	9.03	5.05	-2.93	4.33	4.70	0.04	-2.17	5.13
6											
7	FURNITURE AND FIXTURES	260.6	267.2	287.9	301.8	302.7	315.7	328.9	338.7	341.7	357.8
8	PERCENTAGE CHANGE	-3.53	2.52	7.74	4.85	0.29	4.30	4.16	2.98	0.88	4.74
9											
10	STONE, CLAY AND GLASS	324.3	333.6	357.9	376.0	374.2	390.8	407.2	415.0	413.5	434.7
11	PERCENTAGE CHANGE	-0.05	2.89	7.28	5.05	-0.48	4.43	4.21	1.92	-0.36	5.12
12											
13	PRIMARY METALS	285.7	295.9	321.2	338.2	340.8	359.2	371.3	387.6	392.3	403.9
14	PERCENTAGE CHANGE	-5.27	3.56	8.57	5.28	0.79	5.39	3.38	4.38	1.22	2.95
15											
16	FABRICATED METAL PRODUCTS	489.3	505.4	546.3	575.1	577.9	603.1	625.0	640.7	645.0	674.7
17	PERCENTAGE CHANGE	-10.94	3.29	8.11	5.26	0.49	4.36	3.64	2.51	0.67	4.61
18											
19	NONELECTRICAL MACHINERY	794.2	801.5	879.0	924.6	938.0	964.6	977.5	992.6	977.4	1002.8
20	PERCENTAGE CHANGE	-6.12	0.91	9.67	5.19	1.45	2.84	1.34	1.54	-1.53	2.60
21											
22	ELECTRICAL MACHINERY	801.5	834.6	902.6	951.3	968.1	1010.1	1046.0	1076.1	1091.8	1142.7
23	PERCENTAGE CHANGE	-14.23	4.13	8.15	5.39	1.77	4.34	3.56	2.87	1.46	4.66
24											
25	TRANSPORTATION EQUIPMENT	581.8	627.1	702.6	747.4	750.7	792.1	824.1	849.0	859.6	906.1
26	PERCENTAGE CHANGE	-7.60	7.77	12.04	6.39	0.44	5.51	4.04	3.02	1.25	5.40
27											
28	OTHER DURABLE GOODS	271.9	279.0	293.3	303.3	308.4	318.5	327.5	335.7	341.7	353.7
29	PERCENTAGE CHANGE	4.24	2.60	5.12	3.43	1.68	3.28	2.81	2.50	1.81	3.50

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 7: TENNESSEE NONDURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF 1972 DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	TOTAL NONDURABLE GOODS	5406.1	5635.4	5905.3	6100.1	6232.6	6460.4	6655.0	6847.8	7000.2	7296.3
2	PERCENTAGE CHANGE	-4.59	4.24	4.79	3.30	2.17	3.65	3.01	2.90	2.23	4.23
3											
4	FOOD	1064.0	1100.2	1129.6	1157.1	1176.6	1206.3	1235.5	1263.0	1286.5	1320.0
5	PERCENTAGE CHANGE	-0.03	3.40	2.67	2.44	1.69	2.52	2.42	2.22	1.87	2.60
6											
7	TEXTILES	322.1	341.3	358.6	371.8	380.2	395.1	408.0	418.7	428.4	445.1
8	PERCENTAGE CHANGE	-3.83	5.98	5.08	3.66	2.28	3.91	3.26	2.63	2.32	3.90
9											
10	APPAREL	730.5	772.1	816.0	839.3	859.3	898.4	929.8	958.0	981.9	1016.8
11	PERCENTAGE CHANGE	-1.18	5.69	5.69	2.85	2.38	4.55	3.50	3.03	2.50	3.55
12											
13	PAPER	429.8	448.3	468.6	483.8	494.3	508.1	517.9	528.5	539.5	561.2
14	PERCENTAGE CHANGE	1.16	4.30	4.53	3.24	2.16	2.80	1.93	2.05	2.08	4.02
15											
16	PRINTING AND PUBLISHING	394.4	407.8	422.8	435.9	446.4	462.6	481.0	499.5	516.7	537.5
17	PERCENTAGE CHANGE	-2.99	3.38	3.69	3.08	2.41	3.64	3.99	3.85	3.44	4.03
18											
19	CHEMICALS	1646.8	1709.9	1800.2	1867.7	1907.9	1979.5	2036.5	2102.9	2140.5	2264.0
20	PERCENTAGE CHANGE	-7.97	3.83	5.28	3.75	2.15	3.75	2.88	3.26	1.79	5.77
21											
22	RUBBER AND PLASTICS	501.6	525.2	563.5	590.4	605.4	634.8	660.5	682.0	700.7	733.6
23	PERCENTAGE CHANGE	-9.38	4.72	7.28	4.77	2.54	4.86	4.04	3.25	2.75	4.69
24											
25	OTHER NONDURABLE GOODS	316.9	330.7	345.9	354.1	362.6	375.6	385.8	395.2	405.9	418.1
26	PERCENTAGE CHANGE	-10.29	4.36	4.62	2.37	2.39	3.58	2.73	2.44	2.70	3.01

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 8: TENNESSEE EMPLOYMENT BY SECTOR (THOUSANDS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	NONAGRICULTURAL JOBS	1714.6	1730.4	1756.7	1778.0	1795.0	1820.5	1850.5	1882.9	1912.7	1947.7
2	PERCENTAGE CHANGE	-1.77	0.92	1.52	1.21	0.96	1.42	1.65	1.75	1.58	1.83
3											
4	MANUFACTURING	479.8	485.4	498.7	507.9	511.3	517.0	522.3	526.7	528.2	534.0
5	PERCENTAGE CHANGE	-5.31	1.17	2.75	1.85	0.67	1.11	1.01	0.86	0.28	1.10
6											
7	CONSTRUCTION	81.6	83.9	88.4	89.9	89.0	91.3	93.3	95.4	96.5	98.2
8	PERCENTAGE CHANGE	6.54	2.80	5.37	1.72	-1.06	2.64	2.16	2.25	1.12	1.83
9											
10	MINING	10.8	11.4	11.7	11.7	11.6	11.1	11.0	10.7	10.6	10.4
11	PERCENTAGE CHANGE	6.14	5.56	2.31	0.16	-0.89	-4.03	-1.24	-2.46	-1.24	-2.13
12											
13	TRADE	366.0	363.0	364.5	368.4	375.6	385.3	397.5	411.7	427.4	443.6
14	PERCENTAGE CHANGE	-1.82	-0.83	0.42	1.08	1.95	2.59	3.16	3.58	3.81	3.78
15											
16	SERVICES	322.9	332.3	341.1	347.5	353.0	358.3	364.2	370.3	376.3	382.2
17	PERCENTAGE CHANGE	5.24	2.91	2.66	1.89	1.57	1.50	1.66	1.66	1.63	1.56
18											
19	FINANCE, INSURANCE & REAL ESTATE	76.2	76.8	77.9	79.3	81.4	83.7	86.3	89.1	91.8	94.4
20	PERCENTAGE CHANGE	-2.42	0.76	1.51	1.78	2.56	2.86	3.11	3.21	3.07	2.87
21											
22	TRANS., COMM. & PUBLIC UTILITIES	82.8	83.4	84.3	85.4	86.5	87.7	88.9	90.2	91.4	92.6
23	PERCENTAGE CHANGE	-3.29	0.78	1.09	1.28	1.32	1.37	1.39	1.38	1.33	1.34
24											
25	GOVERNMENT	294.6	294.3	290.1	287.7	286.6	286.0	287.0	288.8	290.5	292.3
26	PERCENTAGE CHANGE	-4.58	-0.10	-1.43	-0.82	-0.37	-0.23	0.35	0.64	0.60	0.62
27											
28	FEDERAL, CIVILIAN	66.1	66.0	65.9	65.9	66.3	67.0	67.8	69.0	70.4	72.0
29	PERCENTAGE CHANGE	-11.88	-0.17	-0.16	0.11	0.60	0.95	1.30	1.71	2.05	2.31
30											
31	STATE & LOCAL	228.5	228.3	224.2	221.7	220.3	219.0	219.1	219.8	220.1	220.3
32	PERCENTAGE CHANGE	-2.24	-0.08	-1.79	-1.09	-0.66	-0.58	0.06	0.30	0.14	0.08
33											
34	TOTAL EMPLOYMENT (THOUS. PERSONS)	1876.2	1895.0	1920.0	1939.4	1954.8	1977.5	2004.1	2032.9	2059.5	2090.7
35	PERCENTAGE CHANGE	-2.23	1.00	1.32	1.01	0.79	1.16	1.35	1.44	1.31	1.52
36											
37	UNEMPLOYMENT (THOUS. PERSONS)	242.7	244.9	227.5	210.0	203.3	181.2	159.2	146.4	138.7	128.1
38	PERCENTAGE CHANGE	26.41	0.90	-7.11	-7.67	-3.18	-10.88	-12.13	-8.06	-5.23	-7.70
39											
40	UNEMPLOYMENT RATE (PERCENT)	11.5	11.4	10.6	9.8	9.4	8.4	7.4	6.7	6.3	5.8
41											
42	CIVILIAN LABOR FORCE (THOUS. PERSONS)	2118.9	2139.8	2147.5	2149.5	2158.2	2158.7	2163.4	2179.3	2198.2	2218.8
43	PERCENTAGE CHANGE	0.37	0.99	0.36	0.09	0.41	0.02	0.22	0.74	0.87	0.93

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 9: TENNESSEE DURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	TOTAL DURABLE GOODS	210.7	212.6	221.3	227.5	229.4	233.3	236.8	239.5	239.8	243.4
2	PERCENTAGE CHANGE	-6.03	0.92	4.08	2.81	0.83	1.71	1.49	1.14	0.14	1.52
3											
4	LUMBER AND WOOD PRODUCTS	16.0	16.4	16.9	17.2	17.0	17.2	17.5	17.4	17.3	17.5
5	PERCENTAGE CHANGE	-7.46	2.58	2.90	1.69	-0.82	0.88	1.53	-0.17	-0.68	1.37
6											
7	FURNITURE AND FIXTURES	21.9	21.8	22.5	22.9	22.6	22.6	22.9	22.9	22.7	23.2
8	PERCENTAGE CHANGE	-3.41	-0.55	3.23	1.59	-1.36	0.34	0.98	0.12	-0.62	1.81
9											
10	STONE, CLAY AND GLASS	13.5	13.6	13.8	14.1	14.2	14.4	14.5	14.7	14.7	14.9
11	PERCENTAGE CHANGE	-3.21	0.87	1.85	1.86	0.72	1.19	1.38	0.99	0.33	1.15
12											
13	PRIMARY METALS	17.2	17.8	18.6	19.1	19.2	19.7	20.0	20.5	20.6	20.9
14	PERCENTAGE CHANGE	-9.94	3.52	4.48	2.69	0.36	2.75	1.71	2.23	0.59	1.50
15											
16	FABRICATED METAL PRODUCTS	27.9	27.9	29.2	30.3	30.8	31.4	32.1	32.6	32.8	33.3
17	PERCENTAGE CHANGE	-8.49	-0.12	4.70	3.73	1.68	2.05	2.02	1.60	0.71	1.65
18											
19	NONELECTRICAL MACHINERY	33.7	33.5	35.3	36.3	36.5	37.0	37.1	37.3	36.7	37.1
20	PERCENTAGE CHANGE	-6.87	-0.65	5.45	2.79	0.42	1.39	0.28	0.50	-1.54	1.25
21											
22	ELECTRICAL MACHINERY	41.3	41.3	42.7	44.0	44.6	45.6	46.5	47.3	47.8	48.9
23	PERCENTAGE CHANGE	-1.90	-0.02	3.29	3.05	1.52	2.17	2.03	1.71	1.05	2.18
24											
25	TRANSPORTATION EQUIPMENT	20.8	22.0	23.7	24.9	25.6	26.4	27.0	27.5	27.8	28.2
26	PERCENTAGE CHANGE	-12.43	5.37	7.96	5.13	2.77	2.89	2.51	1.91	0.83	1.53
27											
28	OTHER DURABLE GOODS	18.3	18.4	18.6	18.8	19.0	19.1	19.2	19.3	19.4	19.4
29	PERCENTAGE CHANGE	-1.46	0.31	1.07	1.17	0.85	0.79	0.64	0.46	0.19	0.24

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 10: TENNESSEE NONDURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	TOTAL NONDURABLE GOODS	269.1	272.8	277.4	280.4	281.9	283.7	285.5	287.3	288.4	290.6
2	PERCENTAGE CHANGE	-4.75	1.36	1.71	1.08	0.54	0.63	0.62	0.63	0.40	0.75
3											
4	FOOD	38.0	38.5	38.8	39.1	39.2	39.2	39.2	39.1	39.0	38.9
5	PERCENTAGE CHANGE	-0.55	1.33	0.91	0.58	0.29	0.11	-0.04	-0.17	-0.29	-0.34
6											
7	TEXTILES	25.0	25.5	25.9	26.2	26.4	26.6	26.7	26.9	26.9	27.1
8	PERCENTAGE CHANGE	-7.03	2.01	1.51	1.22	0.59	0.69	0.69	0.50	0.23	0.81
9											
10	APPAREL	66.3	69.1	71.3	71.8	71.7	71.6	71.6	71.6	71.4	71.2
11	PERCENTAGE CHANGE	-4.61	4.22	3.15	0.71	-0.13	-0.12	-0.02	0.07	-0.28	-0.30
12											
13	PAPER	18.3	18.4	18.6	18.8	18.8	18.9	19.0	19.1	19.2	19.4
14	PERCENTAGE CHANGE	2.68	0.55	1.07	1.09	0.33	0.57	0.52	0.52	0.53	0.98
15											
16	PRINTING AND PUBLISHING	27.6	26.9	27.2	27.5	27.8	28.1	28.7	29.3	29.8	30.4
17	PERCENTAGE CHANGE	1.46	-2.35	0.78	1.31	0.89	1.35	1.93	2.06	1.95	2.00
18											
19	CHEMICALS	56.1	56.2	56.9	57.4	57.7	58.0	58.1	58.3	58.3	58.9
20	PERCENTAGE CHANGE	-4.44	0.18	1.16	0.94	0.52	0.49	0.20	0.32	-0.01	1.07
21											
22	RUBBER AND PLASTICS	19.2	19.4	20.0	20.6	21.1	21.8	22.4	23.0	23.5	24.2
23	PERCENTAGE CHANGE	-8.78	1.03	3.12	3.26	2.53	2.99	2.93	2.62	2.28	2.79
24											
25	OTHER NONDURABLE GOODS	18.7	18.8	18.9	19.1	19.3	19.5	19.8	20.0	20.2	20.4
26	PERCENTAGE CHANGE	-19.53	0.55	0.52	1.13	1.09	1.27	1.11	1.04	1.07	1.11

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 11: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY BY SECTOR (DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	ALL SECTORS	14769.	15761.	17061.	18557.	20097.	21676.	23121.	24500.	25935.	27459.
2	PERCENTAGE CHANGE	5.52	6.72	8.25	8.77	8.30	7.86	6.67	5.96	5.86	5.87
3											
4	MANUFACTURING	16122.	17264.	18627.	20242.	21935.	23646.	25209.	26712.	28292.	29946.
5	PERCENTAGE CHANGE	6.18	7.09	7.89	8.67	8.36	7.80	6.61	5.96	5.92	5.85
6											
7	DURABLE GOODS	16369.	17610.	19045.	20687.	22443.	24174.	25809.	27384.	29001.	30606.
8	PERCENTAGE CHANGE	5.26	7.58	8.15	8.62	8.49	7.71	6.76	6.10	5.90	5.53
9											
10	NONDURABLE GOODS	15928.	16995.	18294.	19882.	21521.	23212.	24711.	26151.	27702.	29393.
11	PERCENTAGE CHANGE	6.97	6.70	7.65	8.68	8.25	7.86	6.46	5.83	5.93	6.10
12											
13	CONSTRUCTION	16078.	17281.	18717.	20441.	22266.	24123.	25823.	27459.	29189.	30955.
14	PERCENTAGE CHANGE	7.33	7.48	8.31	9.21	8.93	8.34	7.05	6.34	6.30	6.05
15											
16	MINING	19228.	20641.	22337.	24371.	26510.	28869.	31161.	33421.	36079.	38563.
17	PERCENTAGE CHANGE	4.60	7.35	8.22	9.11	8.77	8.90	7.94	7.25	7.95	6.88
18											
19	TRADE	11920.	12826.	13873.	15087.	16344.	17603.	18748.	19842.	20983.	22170.
20	PERCENTAGE CHANGE	4.68	7.60	8.16	8.75	8.33	7.71	6.50	5.84	5.75	5.65
21											
22	SERVICES	12878.	13781.	14848.	16086.	17381.	18684.	19886.	21038.	22231.	23469.
23	PERCENTAGE CHANGE	4.79	7.01	7.74	8.34	8.05	7.50	6.43	5.79	5.67	5.57
24											
25	FINANCE, INSURANCE & REAL ESTATE	16387.	17653.	19164.	20917.	22719.	24622.	26352.	28019.	29772.	31654.
26	PERCENTAGE CHANGE	7.62	7.73	8.56	9.15	8.62	8.37	7.03	6.33	6.26	6.32
27											
28	TRANS., COMM. & PUBLIC UTILITIES	22200.	23548.	25724.	28093.	30660.	33439.	35965.	38392.	40912.	43659.
29	PERCENTAGE CHANGE	7.81	6.07	9.24	9.21	9.14	9.06	7.55	6.75	6.56	6.72
30											
31	GOVERNMENT	15710.	16409.	17832.	19418.	20990.	22645.	24218.	25729.	27330.	29121.
32	PERCENTAGE CHANGE	5.50	4.45	8.67	8.89	8.10	7.88	6.95	6.24	6.22	6.56
33											
34	FEDERAL, CIVILIAN	22354.	23555.	25243.	27423.	29840.	32450.	35064.	37538.	40198.	43037.
35	PERCENTAGE CHANGE	3.89	5.37	7.17	8.64	8.82	8.75	8.06	7.05	7.09	7.06
36											
37	STATE & LOCAL	13788.	14344.	15655.	17038.	18325.	19647.	20860.	22022.	23212.	24570.
38	PERCENTAGE CHANGE	8.03	4.04	9.14	8.83	7.55	7.21	6.17	5.57	5.40	5.85
39											
40	AGRICULTURE	6753.	7223.	7759.	8416.	9106.	9817.	10416.	10963.	11550.	12203.
41	PERCENTAGE CHANGE	6.55	6.97	7.42	8.47	8.20	7.81	6.10	5.25	5.35	5.65

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 12: TENNESSEE DURABLE GOODS MANUFACTURING AVERAGE ANNUAL WAGE AND SALARY
(DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	TOTAL DURABLE GOODS	16369.	17610.	19045.	20687.	22443.	24174.	25809.	27384.	29001.	30606.
2	PERCENTAGE CHANGE	5.26	7.58	8.15	8.62	8.49	7.71	6.76	6.10	5.90	5.53
3											
4	LUMBER AND WOOD PRODUCTS	11463.	12266.	13231.	14364.	15667.	16761.	17784.	18935.	20003.	20989.
5	PERCENTAGE CHANGE	6.22	7.01	7.87	8.57	9.07	6.98	6.10	6.47	5.64	4.93
6											
7	FURNITURE AND FIXTURES	11662.	12576.	13633.	14700.	15871.	17075.	18098.	19060.	20194.	21190.
8	PERCENTAGE CHANGE	7.58	7.83	8.41	7.82	7.97	7.59	5.99	5.32	5.95	4.93
9											
10	STONE, CLAY AND GLASS	19901.	21350.	23078.	25189.	27412.	29701.	31761.	33735.	35814.	37983.
11	PERCENTAGE CHANGE	7.81	7.28	8.10	9.15	8.82	8.35	6.94	6.21	6.16	6.06
12											
13	PRIMARY METALS	20804.	22283.	24022.	25985.	28088.	29932.	31821.	33531.	35386.	37266.
14	PERCENTAGE CHANGE	5.64	7.11	7.80	8.17	8.09	6.57	6.31	5.37	5.53	5.31
15											
16	FABRICATED METAL PRODUCTS	17551.	18887.	20368.	22021.	23621.	25285.	26706.	28155.	29640.	31264.
17	PERCENTAGE CHANGE	3.12	7.61	7.85	8.11	7.27	7.05	5.62	5.42	5.27	5.48
18											
19	NONELECTRICAL MACHINERY	18176.	19522.	21054.	22962.	25065.	27099.	29146.	31016.	33119.	34864.
20	PERCENTAGE CHANGE	7.65	7.41	7.84	9.06	9.16	8.12	7.56	6.42	6.78	5.27
21											
22	ELECTRICAL MACHINERY	15234.	16416.	17709.	19101.	20754.	22419.	24096.	25597.	27069.	28616.
23	PERCENTAGE CHANGE	5.95	7.76	7.88	7.86	8.65	8.02	7.48	6.23	5.75	5.71
24											
25	TRANSPORTATION EQUIPMENT	19236.	20685.	22460.	24685.	26795.	28832.	30690.	32530.	34353.	36313.
26	PERCENTAGE CHANGE	3.02	7.53	8.58	9.91	8.55	7.60	6.44	6.00	5.60	5.71
27											
28	OTHER DURABLE GOODS	13706.	14658.	15714.	16861.	18065.	19440.	20850.	22261.	23620.	25137.
29	PERCENTAGE CHANGE	5.71	6.95	7.20	7.30	7.14	7.61	7.25	6.77	6.10	6.42

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 13: TENNESSEE NONDURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY (DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	TOTAL NONDURABLE GOODS	15928.	16995.	18294.	19882.	21521.	23212.	24711.	26151.	27702.	29393.
2	PERCENTAGE CHANGE	6.97	6.70	7.65	8.68	8.25	7.86	6.46	5.83	5.93	6.10
3											
4	FOOD	17156.	18331.	19760.	21591.	23485.	25382.	27063.	28728.	30481.	32399.
5	PERCENTAGE CHANGE	7.02	6.85	7.79	9.27	8.77	8.08	6.62	6.15	6.10	6.29
6											
7	TEXTILES	12125.	13100.	14139.	15432.	16702.	18081.	19192.	20259.	21499.	22865.
8	PERCENTAGE CHANGE	4.28	8.04	7.93	9.15	8.23	8.26	6.14	5.56	6.12	6.35
9											
10	APPAREL	9343.	9986.	10781.	11634.	12500.	13450.	14199.	14915.	15792.	16704.
11	PERCENTAGE CHANGE	6.15	6.88	7.96	7.92	7.44	7.60	5.57	5.04	5.88	5.78
12											
13	PAPER	20187.	21628.	23354.	25417.	27704.	30013.	32137.	34157.	36252.	38501.
14	PERCENTAGE CHANGE	5.98	7.14	7.98	8.83	9.00	8.33	7.08	6.29	6.13	6.21
15											
16	PRINTING AND PUBLISHING	13693.	14662.	15689.	16990.	18270.	19485.	20578.	21662.	22817.	24059.
17	PERCENTAGE CHANGE	6.06	7.07	7.01	8.29	7.53	6.65	5.61	5.27	5.33	5.44
18											
19	CHEMICALS	23841.	25534.	27567.	29953.	32356.	34798.	36997.	39043.	41244.	43552.
20	PERCENTAGE CHANGE	7.48	7.10	7.96	8.66	8.02	7.55	6.32	5.53	5.64	5.59
21											
22	RUBBER AND PLASTICS	20285.	21734.	23343.	25314.	27441.	29744.	31957.	34216.	36474.	38894.
23	PERCENTAGE CHANGE	8.01	7.15	7.40	8.44	8.40	8.39	7.44	7.07	6.60	6.63
24											
25	OTHER NONDURABLE GOODS	12803.	13710.	14851.	16089.	17403.	18719.	20097.	21331.	22514.	23800.
26	PERCENTAGE CHANGE	4.87	7.09	8.32	8.33	8.17	7.56	7.36	6.14	5.55	5.71

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 14: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY BY SECTOR (1972 DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	ALL SECTORS	7194.	7257.	7383.	7507.	7636.	7811.	7970.	8075.	8194.	8258.
2	PERCENTAGE CHANGE	-0.03	0.87	1.74	1.68	1.72	2.30	2.03	1.32	1.48	0.78
3											
4	MANUFACTURING	7853.	7949.	8060.	8189.	8334.	8521.	8690.	8804.	8939.	9006.
5	PERCENTAGE CHANGE	0.59	1.22	1.40	1.59	1.77	2.25	1.98	1.32	1.53	0.75
6											
7	DURABLE GOODS	7973.	8108.	8241.	8369.	8527.	8711.	8897.	9026.	9163.	9205.
8	PERCENTAGE CHANGE	-0.28	1.69	1.64	1.55	1.89	2.16	2.13	1.45	1.52	0.46
9											
10	NONDURABLE GOODS	7759.	7824.	7916.	8043.	8177.	8365.	8518.	8619.	8753.	8840.
11	PERCENTAGE CHANGE	1.34	0.85	1.17	1.60	1.67	2.30	1.83	1.19	1.55	1.00
12											
13	CONSTRUCTION	7832.	7956.	8099.	8269.	8460.	8693.	8901.	9051.	9222.	9310.
14	PERCENTAGE CHANGE	1.68	1.59	1.79	2.10	2.31	2.76	2.40	1.68	1.90	0.95
15											
16	MINING	9366.	9503.	9666.	9859.	10072.	10403.	10741.	11015.	11399.	11598.
17	PERCENTAGE CHANGE	-0.90	1.47	1.71	2.00	2.16	3.29	3.25	2.55	3.49	1.74
18											
19	TRADE	5806.	5905.	6003.	6103.	6210.	6343.	6463.	6540.	6630.	6668.
20	PERCENTAGE CHANGE	-0.83	1.70	1.66	1.66	1.75	2.16	1.88	1.20	1.38	0.57
21											
22	SERVICES	6273.	6345.	6425.	6507.	6604.	6733.	6855.	6934.	7024.	7058.
23	PERCENTAGE CHANGE	-0.72	1.15	1.26	1.29	1.48	1.96	1.81	1.15	1.30	0.49
24											
25	FINANCE, INSURANCE & REAL ESTATE	7982.	8127.	8292.	8462.	8632.	8873.	9084.	9235.	9407.	9520.
26	PERCENTAGE CHANGE	1.96	1.82	2.03	2.04	2.01	2.79	2.38	1.67	1.86	1.20
27											
28	TRANS., COMM. & PUBLIC UTILITIES	10814.	10841.	11131.	11365.	11649.	12050.	12397.	12654.	12926.	13131.
29	PERCENTAGE CHANGE	2.14	0.26	2.67	2.10	2.50	3.44	2.88	2.07	2.15	1.58
30											
31	GOVERNMENT	7652.	7555.	7716.	7855.	7975.	8160.	8348.	8480.	8635.	8758.
32	PERCENTAGE CHANGE	-0.05	-1.27	2.13	1.80	1.52	2.33	2.30	1.58	1.82	1.43
33											
34	FEDERAL, CIVILIAN	10889.	10845.	10923.	11093.	11337.	11694.	12087.	12372.	12701.	12943.
35	PERCENTAGE CHANGE	-1.58	-0.40	0.72	1.56	2.20	3.14	3.36	2.36	2.65	1.91
36											
37	STATE & LOCAL	6716.	6604.	6774.	6892.	6962.	7080.	7191.	7258.	7334.	7389.
38	PERCENTAGE CHANGE	2.34	-1.66	2.57	1.75	1.02	1.69	1.56	0.94	1.04	0.75
39											
40	AGRICULTURE	3289.	3326.	3357.	3405.	3460.	3538.	3590.	3613.	3649.	3670.
41	PERCENTAGE CHANGE	0.94	1.11	0.96	1.40	1.62	2.26	1.49	0.64	0.99	0.57

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 15: TENNESSEE DURABLE GOODS MANUFACTURING AVERAGE ANNUAL WAGE AND SALARY
(1972 DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	TOTAL DURABLE GOODS	7973.	8108.	8241.	8369.	8527.	8711.	8897.	9026.	9163.	9205.
2	PERCENTAGE CHANGE	-0.28	1.69	1.64	1.55	1.89	2.16	2.13	1.45	1.52	0.46
3											
4	LUMBER AND WOOD PRODUCTS	5584.	5647.	5725.	5811.	5953.	6040.	6130.	6241.	6320.	6313.
5	PERCENTAGE CHANGE	0.63	1.14	1.38	1.49	2.44	1.47	1.49	1.81	1.27	-0.12
6											
7	FURNITURE AND FIXTURES	5681.	5790.	5899.	5946.	6030.	6153.	6238.	6282.	6381.	6373.
8	PERCENTAGE CHANGE	1.92	1.93	1.89	0.80	1.41	2.04	1.39	0.70	1.57	-0.12
9											
10	STONE, CLAY AND GLASS	9693.	9830.	9986.	10190.	10415.	10703.	10948.	11119.	11316.	11423.
11	PERCENTAGE CHANGE	2.13	1.40	1.59	2.04	2.21	2.77	2.29	1.56	1.77	0.95
12											
13	PRIMARY METALS	10133.	10259.	10394.	10512.	10672.	10786.	10969.	11052.	11181.	11208.
14	PERCENTAGE CHANGE	0.09	1.24	1.32	1.13	1.52	1.07	1.69	0.76	1.17	0.24
15											
16	FABRICATED METAL PRODUCTS	8549.	8696.	8814.	8908.	8974.	9112.	9206.	9280.	9365.	9403.
17	PERCENTAGE CHANGE	-2.31	1.71	1.36	1.07	0.75	1.53	1.03	0.80	0.92	0.40
18											
19	NONELECTRICAL MACHINERY	8854.	8988.	9110.	9289.	9523.	9765.	10047.	10223.	10464.	10485.
20	PERCENTAGE CHANGE	1.98	1.52	1.36	1.96	2.52	2.54	2.88	1.75	2.36	0.20
21											
22	ELECTRICAL MACHINERY	7420.	7558.	7663.	7727.	7885.	8079.	8306.	8437.	8553.	8606.
23	PERCENTAGE CHANGE	0.38	1.85	1.39	0.84	2.05	2.46	2.81	1.57	1.37	0.63
24											
25	TRANSPORTATION EQUIPMENT	9370.	9524.	9719.	9986.	10181.	10390.	10579.	10722.	10854.	10921.
26	PERCENTAGE CHANGE	-2.40	1.64	2.05	2.75	1.95	2.06	1.82	1.35	1.23	0.62
27											
28	OTHER DURABLE GOODS	6676.	6749.	6800.	6821.	6864.	7006.	7187.	7337.	7463.	7560.
29	PERCENTAGE CHANGE	0.15	1.09	0.75	0.31	0.63	2.07	2.59	2.09	1.71	1.30
30											

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 16: TENNESSEE NONDURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY (1972 DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	TOTAL NONDURABLE GOODS	7759.	7824.	7916.	8043.	8177.	8365.	8518.	8619.	8753.	8840.
2	PERCENTAGE CHANGE	1.34	0.85	1.17	1.60	1.67	2.30	1.83	1.19	1.55	1.00
3											
4	FOOD	8357.	8440.	8550.	8734.	8923.	9147.	9329.	9469.	9631.	9744.
5	PERCENTAGE CHANGE	1.39	0.99	1.31	2.15	2.16	2.51	1.99	1.50	1.71	1.18
6											
7	TEXTILES	5906.	6031.	6118.	6243.	6346.	6516.	6616.	6677.	6793.	6877.
8	PERCENTAGE CHANGE	-1.21	2.12	1.44	2.04	1.65	2.68	1.53	0.93	1.73	1.24
9											
10	APPAREL	4551.	4597.	4665.	4706.	4749.	4847.	4895.	4916.	4990.	5024.
11	PERCENTAGE CHANGE	0.57	1.03	1.47	0.89	0.91	2.05	0.99	0.43	1.50	0.69
12											
13	PAPER	9833.	9958.	10106.	10282.	10526.	10816.	11078.	11258.	11454.	11579.
14	PERCENTAGE CHANGE	0.41	1.27	1.49	1.74	2.37	2.75	2.42	1.63	1.74	1.09
15											
16	PRINTING AND PUBLISHING	6670.	6750.	6789.	6873.	6942.	7022.	7093.	7140.	7209.	7236.
17	PERCENTAGE CHANGE	0.48	1.21	0.57	1.24	1.00	1.15	1.02	0.65	0.97	0.37
18											
19	CHEMICALS	11613.	11756.	11929.	12117.	12293.	12540.	12753.	12869.	13031.	13098.
20	PERCENTAGE CHANGE	1.83	1.24	1.47	1.58	1.45	2.01	1.70	0.90	1.27	0.51
21											
22	RUBBER AND PLASTICS	9880.	10007.	10101.	10240.	10426.	10719.	11016.	11277.	11524.	11697.
23	PERCENTAGE CHANGE	2.32	1.28	0.94	1.38	1.81	2.81	2.77	2.37	2.19	1.50
24											
25	OTHER NONDURABLE GOODS	6236.	6312.	6426.	6508.	6612.	6746.	6928.	7031.	7113.	7158.
26	PERCENTAGE CHANGE	-0.64	1.22	1.81	1.28	1.59	2.02	2.70	1.49	1.18	0.63

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 17: TENNESSEE PERSONAL INCOME BY COMPONENTS

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	TOTAL PERSONAL INCOME (MIL $)	41280.	44591.	48435.	53016.	57767.	62910.	68024.	73279.	78657.	84817.
2	PERCENTAGE CHANGE	5.96	8.02	8.62	9.46	8.96	8.90	8.13	7.73	7.34	7.83
3											
4	WAGES AND SALARIES	25968.	27958.	30710.	33797.	36953.	40406.	43794.	47201.	50744.	54696.
5	PERCENTAGE CHANGE	3.69	7.66	9.85	10.05	9.34	9.35	8.38	7.78	7.51	7.79
6											
7	OTHER LABOR INCOME	2676.	2958.	3289.	3661.	4019.	4491.	4977.	5492.	6058.	6723.
8	PERCENTAGE CHANGE	9.94	10.53	11.19	11.32	9.78	11.75	10.83	10.34	10.30	10.99
9											
10	PROPRIETORS' INCOME	1845.	2025.	2183.	2413.	2648.	2876.	3096.	3307.	3511.	3732.
11	PERCENTAGE CHANGE	-1.67	9.75	7.78	10.58	9.71	8.62	7.66	6.81	6.17	6.30
12											
13	PROPERTY INCOME	6666.	7188.	7660.	8133.	8584.	9145.	9766.	10404.	11129.	11903.
14	PERCENTAGE CHANGE	12.69	7.84	6.56	6.18	5.54	6.53	6.80	6.53	6.97	6.95
15											
16	TRANSFER PAYMENTS	6553.	7079.	7507.	8215.	9091.	9902.	10703.	11612.	12564.	13650.
17	PERCENTAGE CHANGE	8.70	8.03	6.04	9.43	10.67	8.92	8.08	8.50	8.20	8.64
18											
19	LESS: PERS. CONT. FOR SOCIAL INS.	2045.	2217.	2475.	2719.	2992.	3318.	3663.	4029.	4580.	5048.
20	PERCENTAGE CHANGE	4.84	8.38	11.66	9.86	10.05	10.87	10.42	10.00	13.65	10.23
21											
22	RESIDENCE ADJUSTMENT	-383.	-401.	-438.	-484.	-535.	-592.	-649.	-708.	-769.	-839.
23	PERCENTAGE CHANGE	-2.06	4.74	9.18	10.59	10.35	10.71	9.69	9.02	8.71	9.01
24											
25	PER CAPITA PERSONAL INCOME ($)	8910.	9558.	10318.	11217.	12077.	13016.	13915.	14790.	15671.	16694.
26	PERCENTAGE CHANGE	5.48	7.28	7.95	8.72	7.66	7.77	6.91	6.29	5.95	6.53
27											
28	TOTAL PERSONAL INCOME (MIL 72 $)	20107.3	20529.8	20958.5	21446.7	21948.1	22670.4	23448.3	24152.6	24852.0	25508.8
29	PERCENTAGE CHANGE	0.39	2.10	2.09	2.33	2.34	3.29	3.43	3.00	2.90	2.64
30											
31	PER CAPITA PERSONAL INCOME (72 $)	4340.	4401.	4465.	4538.	4588.	4690.	4797.	4875.	4951.	5021.
32	PERCENTAGE CHANGE	-0.07	1.40	1.45	1.64	1.12	2.22	2.26	1.63	1.57	1.41
33											
34	TN INDIVIDUAL IRS COLLECTIONS (MIL $)	4959.1	5372.0	5910.1	6633.2	7456.4	8389.8	9318.4	10257.6	11265.2	12408.0
35	PERCENTAGE CHANGE	12.76	8.33	10.02	12.24	12.41	12.52	11.07	10.08	9.82	10.14
36											
37	DISPOSABLE PERSONAL INCOME (MIL $)	36321.	39219.	42525.	46383.	50311.	54521.	58705.	63021.	67391.	72409.
38	PERCENTAGE CHANGE	5.10	7.98	8.43	9.07	8.47	8.37	7.67	7.35	6.93	7.45
39											
40	PER CAPITA DISPOSABLE INCOME ($)	7839.	8407.	9059.	9814.	10518.	11280.	12009.	12720.	13426.	14252.
41	PERCENTAGE CHANGE	4.62	7.24	7.76	8.33	7.18	7.24	6.46	5.92	5.55	6.15
42											
43	DISPOSABLE INCOME (MIL 72 $)	17691.7	18056.5	18401.2	18763.4	19115.2	19647.1	20236.2	20771.7	21292.7	21777.1
44	PERCENTAGE CHANGE	-0.43	2.06	1.91	1.97	1.87	2.78	3.00	2.65	2.51	2.27
45											
46	PER CAPITA DISPOSABLE INCOME (72 $)	3818.	3871.	3920.	3970.	3996.	4065.	4139.	4192.	4242.	4286.
47	PERCENTAGE CHANGE	-0.90	1.36	1.27	1.28	0.66	1.72	1.84	1.28	1.19	1.04

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 18: TENNESSEE RETAIL SALES

#	DESCRIPTION	1982	1983	1984	FORECAST DATA 1985	1986	1987	1988	1989	1990	1991
1	TOTAL (MIL $)	19870.	21013.	23111.	25205.	27523.	29974.	32529.	35164.	37880.	40842.
2	PERCENTAGE CHANGE	6.09	5.76	9.98	9.06	9.19	8.91	8.52	8.10	7.72	7.82
3											
4	AUTOMOTIVE	3263.	3250.	3788.	4072.	4376.	4715.	5088.	5514.	5961.	6467.
5	PERCENTAGE CHANGE	1.96	-0.39	16.54	7.49	7.48	7.75	7.90	8.37	8.11	8.49
6											
7	NONAUTOMOTIVE	16606.	17763.	19323.	21134.	23146.	25258.	27441.	29651.	31920.	34375.
8	PERCENTAGE CHANGE	6.94	6.97	8.78	9.37	9.52	9.12	8.64	8.05	7.65	7.69
9											
10											
11	TOTAL (MIL 72 $)	9678.	9675.	10000.	10196.	10457.	10801.	11213.	11590.	11969.	12283.
12	PERCENTAGE CHANGE	0.51	-0.04	3.37	1.96	2.55	3.29	3.81	3.36	3.26	2.63
13											
14	AUTOMOTIVE	1589.	1496.	1639.	1647.	1663.	1699.	1754.	1817.	1883.	1945.
15	PERCENTAGE CHANGE	-3.41	-5.85	9.53	0.49	0.94	2.20	3.22	3.62	3.63	3.27
16											
17	NONAUTOMOTIVE	8089.	8178.	8361.	8549.	8794.	9102.	9459.	9773.	10085.	10338.
18	PERCENTAGE CHANGE	1.32	1.11	2.24	2.25	2.87	3.50	3.92	3.32	3.20	2.51
19											
20											
21	MOTOR VEHICLE REGISTRATIONS	3621.	3681.	3742.	3802.	3883.	3960.	4027.	4093.	4161.	4232.
22	PERCENTAGE CHANGE	2.50	1.64	1.67	1.60	2.11	2.00	1.67	1.65	1.66	1.72

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 19: TENNESSEE ENERGY CONSUMPTION - SELECTED CATEGORIES

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	ELECTRICITY (MIL. KWH)	48522.	49678.	51484.	52881.	53621.	55139.	56651.	58126.	59413.	61067.
2	PERCENTAGE CHANGE	-1.12	2.38	3.64	2.71	1.40	2.83	2.74	2.60	2.21	2.78
3											
4	RESIDENTIAL	23917.	24213.	24574.	24969.	25047.	25461.	25930.	26375.	26737.	26884.
5	PERCENTAGE CHANGE	-1.13	1.24	1.49	1.61	0.31	1.66	1.84	1.71	1.38	0.55
6											
7	COMMERCIAL	4303.	4422.	4608.	4736.	4836.	4994.	5136.	5275.	5391.	5579.
8	PERCENTAGE CHANGE	-1.92	2.76	4.22	2.78	2.10	3.27	2.85	2.71	2.19	3.50
9											
10	INDUSTRIAL	20302.	21044.	22302.	23175.	23738.	24684.	25585.	26477.	27285.	28603.
11	PERCENTAGE CHANGE	-0.94	3.65	5.98	3.92	2.43	3.98	3.65	3.49	3.05	4.83
12											
13	TOTAL GAS (MIL. THERMS)	2076.	2095.	2094.	2087.	2004.	2048.	2026.	2004.	1981.	1959.
14	PERCENTAGE CHANGE	-1.63	0.94	-0.06	-0.33	-4.00	2.21	-1.09	-1.05	-1.16	-1.10
15											
16	RESIDENTIAL	437.	440.	440.	437.	429.	437.	435.	433.	430.	427.
17	PERCENTAGE CHANGE	-0.65	0.72	-0.17	-0.62	-1.72	1.72	-0.36	-0.48	-0.67	-0.68
18											
19	COMMERCIAL	368.	369.	366.	364.	347.	356.	352.	349.	346.	342.
20	PERCENTAGE CHANGE	-1.82	0.19	-0.87	-0.51	-4.51	2.34	-0.99	-0.81	-0.92	-1.01
21											
22	INDUSTRIAL	1270.	1286.	1289.	1286.	1227.	1256.	1239.	1222.	1205.	1190.
23	PERCENTAGE CHANGE	-1.90	1.23	0.21	-0.17	-4.62	2.35	-1.36	-1.31	-1.39	-1.28
24											
25	COAL (THOUS. TONS)	20462.	20654.	21209.	21369.	21409.	21680.	21638.	21684.	21806.	21890.
26	PERCENTAGE CHANGE	-0.17	0.94	2.68	0.76	0.19	1.27	-0.19	0.21	0.56	0.39
27											
28	GASOLINE (MIL. GAL.)	2322.	2335.	2331.	2336.	2347.	2388.	2436.	2482.	2529.	2572.
29	PERCENTAGE CHANGE	-0.79	0.55	-0.16	0.23	0.44	1.77	2.00	1.91	1.87	1.70
30											
31	FUEL OIL (THOUS. BARRELS)	18264.	18710.	19353.	19865.	20350.	21048.	21179.	21813.	22329.	23174.
32	PERCENTAGE CHANGE	-2.24	2.44	3.44	2.65	2.44	3.43	0.62	2.99	2.37	3.78

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 20: TENNESSEE ENERGY CONSUMPTION
(TRILLIONS OF BTU'S)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	ELECTRICITY	238.5	242.2	247.0	250.9	253.0	257.0	260.8	264.4	267.4	270.7
2	PERCENTAGE CHANGE	-1.25	1.58	1.97	1.55	0.87	1.56	1.49	1.38	1.13	1.22
3											
4	RESIDENTIAL	83.0	83.8	84.8	86.0	86.2	87.5	88.9	90.3	91.4	91.8
5	PERCENTAGE CHANGE	-1.24	1.00	1.27	1.40	0.22	1.48	1.65	1.54	1.23	0.47
6											
7	COMMERCIAL	47.3	48.5	50.3	51.6	52.6	54.2	55.6	57.0	58.2	60.1
8	PERCENTAGE CHANGE	-2.01	2.39	3.81	2.52	1.91	3.03	2.66	2.53	2.06	3.29
9											
10	INDUSTRIAL	108.2	110.0	111.9	113.2	114.2	115.3	116.3	117.1	117.8	118.7
11	PERCENTAGE CHANGE	-0.92	1.67	1.69	1.23	0.89	0.95	0.81	0.72	0.60	0.77
12											
13	NATURAL GAS	224.2	225.6	225.2	224.4	216.7	220.3	218.0	215.7	213.3	210.9
14	PERCENTAGE CHANGE	-1.35	0.61	-0.17	-0.36	-3.43	1.66	-1.06	-1.03	-1.13	-1.11
15											
16	RESIDENTIAL	42.8	43.0	43.0	42.8	42.4	42.8	42.7	42.6	42.5	42.3
17	PERCENTAGE CHANGE	-0.22	0.45	-0.06	-0.33	-0.93	0.93	-0.19	-0.26	-0.37	-0.37
18											
19	COMMERCIAL	43.2	43.1	42.7	42.5	41.1	41.7	41.4	41.2	40.9	40.6
20	PERCENTAGE CHANGE	-2.02	-0.31	-0.88	-0.53	-3.31	1.59	-0.74	-0.59	-0.66	-0.72
21											
22	INDUSTRIAL	122.1	123.1	123.2	122.9	118.5	120.6	119.3	118.1	116.8	115.7
23	PERCENTAGE CHANGE	-1.76	0.81	0.07	-0.19	-3.66	1.84	-1.07	-1.02	-1.08	-0.99
24											
25	OTHER	16.1	16.4	16.4	16.2	14.8	15.1	14.5	13.8	13.1	12.3
26	PERCENTAGE CHANGE	0.72	1.97	-0.38	-1.32	-8.65	2.46	-4.26	-4.66	-5.39	-5.84
27											
28	COAL	550.6	547.2	557.7	560.7	561.4	566.5	565.7	566.6	568.8	570.4
29	PERCENTAGE CHANGE	-2.85	-0.61	1.91	0.54	0.13	0.90	-0.14	0.15	0.40	0.28
30											
31	FUEL OIL	107.0	109.6	113.4	116.4	119.2	123.3	124.1	127.8	130.9	135.8
32	PERCENTAGE CHANGE	-2.21	2.45	3.45	2.66	2.45	3.44	0.62	3.00	2.37	3.80
33											
34	GASOLINE	282.8	284.4	283.9	284.6	285.8	290.9	296.7	302.3	307.9	313.1
35	PERCENTAGE CHANGE	0.02	0.54	-0.16	0.23	0.44	1.76	1.99	1.90	1.86	1.69
36											
37	OTHER	458.8	461.0	467.4	470.9	470.6	478.4	481.0	485.1	489.2	493.7
38	PERCENTAGE CHANGE	-0.96	0.46	1.40	0.74	-0.05	1.65	0.54	0.86	0.84	0.92
39											
40	TOTAL ENERGY CONSUMPTION	1862.0	1870.0	1894.6	1907.8	1906.9	1936.4	1946.3	1962.0	1977.5	1994.7
41	PERCENTAGE CHANGE	-1.54	0.43	1.32	0.69	-0.05	1.55	0.51	0.81	0.79	0.87
42											
43	GROSS ENERGY CONSUMPTION	1623.5	1627.8	1647.6	1656.9	1653.8	1679.4	1685.5	1697.6	1710.1	1724.0
44	PERCENTAGE CHANGE	-1.58	0.26	1.22	0.56	-0.19	1.55	0.36	0.72	0.74	0.81
45											
46	NET ENERGY CONSUMPTION	1278.8	1279.9	1295.2	1300.6	1295.4	1316.9	1319.0	1327.5	1337.0	1347.6
47	PERCENTAGE CHANGE	-1.62	0.09	1.19	0.42	-0.41	1.66	0.16	0.64	0.72	0.79

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 21: TENNESSEE ENERGY PRICES

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	ELECTRICITY (CENTS/KILOWATT-HOUR)	4.76	5.06	5.38	5.71	6.11	6.55	6.99	7.42	7.87	8.32
2	PERCENTAGE CHANGE	11.06	6.25	6.25	6.13	7.06	7.18	6.76	6.21	6.02	5.71
3											
4	RESIDENTIAL	4.67	4.96	5.28	5.57	5.97	6.40	6.83	7.25	7.67	8.13
5	PERCENTAGE CHANGE	11.69	6.23	6.47	5.49	7.15	7.30	6.66	6.12	5.88	5.91
6											
7	COMMERCIAL	5.50	5.84	6.18	6.60	7.06	7.52	8.02	8.53	9.04	9.51
8	PERCENTAGE CHANGE	10.64	6.26	5.80	6.78	6.88	6.64	6.61	6.30	6.08	5.16
9											
10	INDUSTRIAL	4.72	5.01	5.32	5.67	6.06	6.50	6.95	7.38	7.83	8.27
11	PERCENTAGE CHANGE	10.48	6.23	6.06	6.66	6.98	7.15	6.88	6.25	6.13	5.58
12											
13											
14	TOTAL GAS (CENTS/THERM)	38.0	44.7	51.3	59.1	70.0	80.9	86.4	91.6	97.1	102.9
15	PERCENTAGE CHANGE	17.64	17.57	14.72	15.38	18.30	15.58	6.82	6.04	6.01	5.92
16											
17	RESIDENTIAL	39.4	46.1	52.8	61.2	73.1	82.0	85.9	89.0	91.8	94.5
18	PERCENTAGE CHANGE	16.91	16.89	14.67	15.93	19.45	12.07	4.87	3.54	3.16	2.94
19											
20	COMMERCIAL	40.9	47.6	54.2	61.7	71.4	81.3	87.0	92.7	98.8	105.0
21	PERCENTAGE CHANGE	16.05	16.63	13.85	13.80	15.74	13.77	7.03	6.55	6 53	6.37
22											
23	INDUSTRIAL	36.7	43.4	49.9	57.7	68.4	80.4	86.4	92.2	98.6	105.3
24	PERCENTAGE CHANGE	18.41	18.15	15.03	15.69	18.59	17.44	7.46	6.78	6.85	6.80
25											
26	COAL PRICE ($/TON)	42.67	46.10	49.64	53.73	58.56	63.50	67.75	72.83	76.80	81.97
27	PERCENTAGE CHANGE	5.91	8.04	7.68	8.23	8.99	8.44	6.69	7.51	5.45	6.74

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 22: TENNESSEE COMMERCIAL BANKS AND SAVINGS AND LOANS
ASSETS AND LIABLITIES (MILLIONS OF DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	COMMERCIAL BANKS										
2	ASSETS	27671.	29447.	31462.	33977.	36814.	40009.	43448.	47196.	50899.	55385.
3	PERCENTAGE CHANGE	6.01	6.42	6.84	8.00	8.35	8.68	8.60	8.63	7.85	8.81
4											
5	TOTAL LOANS	14994.	16415.	17685.	19207.	20896.	22787.	24816.	27026.	29208.	31852.
6	PERCENTAGE CHANGE	10.25	9.47	7.74	8.61	8.79	9.05	8.91	8.90	8.08	9.05
7											
8	SECURITIES AND OTHER INVESTMENTS	12676.	13032.	13777.	14770.	15918.	17222.	18632.	20170.	21691.	23533.
9	PERCENTAGE CHANGE	1.39	2.81	5.72	7.21	7.77	8.19	8.19	8.26	7.54	8.49
10											
11	LIABILITIES										
12	TOTAL DEPOSITS	22708.	23981.	25728.	27827.	30167.	32786.	35602.	38666.	41692.	45354.
13	PERCENTAGE CHANGE	7.34	5.61	7.28	8.16	8.41	8.68	8.59	8.61	7.83	8.79
14											
15	DEMAND DEPOSITS	5742.	5886.	6006.	6254.	6558.	6889.	7219.	7518.	7757.	7921.
16	PERCENTAGE CHANGE	1.33	2.50	2.04	4.14	4.85	5.05	4.80	4.14	3.17	2.12
17											
18	TIME DEPOSITS	16966.	18096.	19723.	21573.	23609.	25897.	28382.	31147.	33935.	37433.
19	PERCENTAGE CHANGE	9.53	6.66	8.99	9.38	9.44	9.69	9.60	9.74	8.95	10.31
20											
21	AVERAGE YIELDS (PERCENT)										
22	LOANS	15.00	12.14	10.93	10.57	10.20	10.20	9.97	9.66	9.30	9.14
23	PERCENTAGE CHANGE	-3.25	-19.08	-9.97	-3.25	-3.55	-0.03	-2.18	-3.14	-3.76	-1.72
24											
25	SECURITIES	12.06	9.65	8.41	7.88	7.61	7.57	7.50	7.31	7.06	6.83
26	PERCENTAGE CHANGE	-3.04	-19.98	-12.86	-6.30	-3.49	-0.50	-0.93	-2.50	-3.48	-3.13
27											
28											
29	SAVINGS AND LOANS										
30	ASSETS	8209.	8918.	9837.	10796.	11878.	13064.	14413.	15972.	17616.	19586.
31	PERCENTAGE CHANGE	6.83	8.63	10.31	9.75	10.02	9.98	10.33	10.82	10.29	11.18
32											
33	TOTAL LOANS	6999.	7627.	8430.	9265.	10205.	11233.	12403.	13756.	15182.	16890.
34	PERCENTAGE CHANGE	7.60	8.97	10.53	9.90	10.14	10.08	10.42	10.90	10.37	11.25
35											
36	SECURITIES AND OTHER INVESTMENTS	1210.	1290.	1406.	1531.	1673.	1830.	2009.	2216.	2435.	2696.
37	PERCENTAGE CHANGE	2.61	6.66	8.98	8.86	9.31	9.37	9.77	10.30	9.85	10.74
38											
39	LIABILITIES										
40	TIME DEPOSITS	6942.	7446.	8170.	8950.	9840.	10821.	11940.	13234.	14599.	16235.
41	PERCENTAGE CHANGE	7.25	7.25	9.74	9.54	9.95	9.97	10.34	10.84	10.31	11.20

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

CONTROL SOLUTION: DECEMBER, 1982

TABLE 23: TENNESSEE AGRICULTURAL OUTPUT
(MILLIONS OF DOLLARS)

#	DESCRIPTION	FORECAST DATA 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	CASH RECEIPTS	1932.2	2017.7	2149.3	2270.1	2389.3	2489.0	2595.6	2713.5	2849.2	2996.7
2	PERCENTAGE CHANGE	5.26	4.42	6.52	5.62	5.25	4.17	4.28	4.55	5.00	5.18
3											
4	CROPS	913.4	934.2	984.2	1030.2	1076.3	1114.7	1157.4	1204.8	1260.3	1318.6
5	PERCENTAGE CHANGE	-8.37	2.27	5.35	4.68	4.47	3.56	3.83	4.09	4.61	4.63
6											
7	MEAT ANIMALS	571.1	610.0	658.7	698.0	736.0	766.4	801.2	840.6	888.2	938.9
8	PERCENTAGE CHANGE	37.36	6.80	7.98	5.97	5.45	4.13	4.54	4.91	5.66	5.71
9											
10	DAIRY PRODUCTS	326.4	346.3	371.1	399.4	427.8	453.2	476.3	501.2	526.6	557.4
11	PERCENTAGE CHANGE	6.04	6.10	7.16	7.62	7.11	5.93	5.10	5.23	5.06	5.84
12											
13	POULTRY AND EGGS	121.2	127.2	135.4	142.4	149.1	154.7	160.6	167.0	174.2	181.9
14	PERCENTAGE CHANGE	5.32	4.94	6.38	5.23	4.69	3.74	3.82	3.96	4.35	4.37
15											
16	EXPENSES	858.8	884.2	930.5	974.5	1017.9	1056.1	1096.5	1139.3	1186.7	1235.7
17	PERCENTAGE CHANGE	0.04	2.96	5.24	4.73	4.45	3.76	3.82	3.90	4.16	4.13
18											
19	GROSS OUTPUT	1073.5	1133.5	1218.8	1295.6	1371.4	1432.8	1499.0	1574.2	1662.5	1761.0
20	PERCENTAGE CHANGE	9.85	5.60	7.52	6.30	5.85	4.48	4.62	5.01	5.61	5.92
21											
22	GROSS OUTPUT (MIL 72 $)	521.1	529.2	535.2	541.5	548.1	553.3	557.8	563.1	568.6	575.6
23	PERCENTAGE CHANGE	5.26	1.54	1.14	1.18	1.21	0.94	0.83	0.95	0.97	1.23
24											
25	AGRICULTURAL JOBS	92.0	88.2	84.7	81.3	78.1	74.9	71.9	69.0	66.4	64.0
26	PERCENTAGE CHANGE	-4.17	-4.09	-3.97	-3.99	-4.01	-4.09	-4.04	-3.93	-3.80	-3.69

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

APPENDIX II

HISTORICAL DATA

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 1: TENNESSEE SELECTED INDICATORS

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TN GROSS STATE PRODUCT (MIL. DOL.)	20976.	23893.	26011.	27139.	30609.	34885.	39629.	43629.	46028.	51149.
2	PERCENTAGE CHANGE	13.38	13.91	8.86	4.34	12.79	13.97	13.60	10.09	5.50	11.12
3											
4	TN GROSS STATE PRODUCT (MIL 72 $)	20976.1	22878.6	23011.8	21838.0	23460.3	25160.4	26735.0	27544.5	26731.3	27270.9
5	PERCENTAGE CHANGE	9.83	9.07	0.58	-5.10	7.43	7.25	6.26	3.03	-2.95	2.02
6											
7	US GROSS NATIONAL PRODUCT (BIL 72 $)	1185.9	1255.0	1248.0	1233.9	1298.2	1369.7	1438.6	1479.4	1474.0	1502.6
8	PERCENTAGE CHANGE	5.66	5.83	-0.56	-1.13	5.21	5.51	5.03	2.84	-0.37	1.94
9											
10	TN PERSONAL INCOME (MIL. DOL.)	14981.	17011.	18793.	20304.	22672.	25155.	28542.	31983.	35031.	38957.
11	PERCENTAGE CHANGE	12.15	13.55	10.47	8.04	11.66	10.95	13.46	12.06	9.53	11.21
12											
13	TN PERSONAL INCOME (MIL 72 $)	14980.6	16093.8	16158.9	16216.9	17210.9	18052.4	19145.9	19684.5	19551.4	20029.4
14	PERCENTAGE CHANGE	8.22	7.43	0.40	0.36	6.13	4.89	6.06	2.81	-0.68	2.44
15											
16	US PERSONAL INCOME (BIL 72 $)	951.4	1007.7	1004.8	1010.4	1056.1	1105.5	1162.3	1200.9	1205.8	1242.1
17	PERCENTAGE CHANGE	5.71	5.93	-0.29	0.55	4.53	4.67	5.14	3.32	0.41	3.01
18											
19	TN EMPLOYED PERSONS (THOUS)	1664.0	1683.0	1728.0	1658.0	1757.0	1822.0	185 .0	1924.0	1930.0	1919.0
20	PERCENTAGE CHANGE	4.85	1.14	2.67	-4.05	5.97	3.70	1..7	3.66	0.31	-0.57
21											
22	US EMPLOYED PERSONS (MIL)	82.2	85.1	86.8	85.8	88.8	92.0	96.0	98.8	99.3	100.4
23	PERCENTAGE CHANGE	3.51	3.54	2.03	-1.09	3.39	3.68	4.38	2.89	0.48	1.10
24											
25	TN UNEMPLOYMENT RATE	3.7	3.9	5.1	8.3	6.0	6.3	5.7	5.8	7.3	9.1
26											
27	US UNEMPLOYMENT RATE	5.6	4.9	5.6	8.5	7.7	7.1	6.1	5.8	7.1	7.6
28											
29	IMPLICIT DEFLATOR, GSP	100.0	104.4	113.0	124.3	130.5	138.7	148.2	158.4	172.2	187.6
30	PERCENTAGE CHANGE	3.23	4.44	8.23	9.95	4.99	6.27	6.91	6.86	8.71	8.93
31											
32	IMPLICIT DEFLATOR, GNP	100.0	105.7	114.9	125.6	132.3	140.1	150.4	163.4	178.6	195.5
33	PERCENTAGE CHANGE	4.16	5.69	8.73	9.26	5.40	5.83	7.40	8.64	9.31	9.44
34											
35	TN MFG OUTPUT / EMPLOYEE (THOUS 72 $)	15.7	16.9	17.1	16.5	17.3	18.5	18.8	19.3	19.2	19.7
36	PERCENTAGE CHANGE	7.24	7.90	1.42	-3.72	4.81	6.75	1.58	2.98	-0.81	2.67
37											
38	US MFG OUTPUT / EMPLOYEE (THOUS 72 $)	15.3	16.1	15.5	15.8	16.7	17.2	17.4	17.4	17.3	17.8
39	PERCENTAGE CHANGE	6.58	5.68	-3.82	1.82	5.71	3.14	1.10	0.12	-0.72	2.83
40											
41	TN PER CAPITA INCOME ($)	3664.	4111.	4473.	4765.	5237.	5715.	6397.	7055.	7613.	8447.
42	PERCENTAGE CHANGE	10.00	12.20	8.81	6.53	9.91	9.13	11.93	10.29	7.91	10.95
43											
44	TN POPULATION (THOUS.)	4088.	4138.	4202.	4261.	4329.	4402.	4462.	4533.	4602.	4612.
45	PERCENTAGE CHANGE	1.95	1.22	1.55	1.40	1.60	1.69	1.36	1.59	1.52	0.22

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 2: TENNESSEE GROSS STATE PRODUCT BY SECTOR (MILLIONS OF DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	GROSS STATE PRODUCT	20976.	23893.	26011.	27139.	30609.	34885.	39629.	43629.	46028.	51149.
2	PERCENTAGE CHANGE	13.38	13.91	8.86	4.34	12.79	13.97	13.60	10.09	5.50	11.12
3											
4	MANUFACTURING	7662.	8772.	9564.	9289.	10724.	12663.	14046.	15152.	15585.	17604.
5	PERCENTAGE CHANGE	13.88	14.49	9.02	-2.87	15.44	18.09	10.92	7.88	2.86	12.95
6											
7	DURABLE GOODS	3334.	3857.	4192.	3763.	4653.	5500.	6324.	6872.	6766.	7694.
8	PERCENTAGE CHANGE	19.24	15.69	8.70	-10.24	23.67	18.18	14.98	8.67	-1.54	13.71
9											
10	NONDURABLE GOODS	4328.	4916.	5372.	5527.	6070.	7164.	7722.	8281.	8819.	9910.
11	PERCENTAGE CHANGE	10.07	13.58	9.27	2.89	9.84	18.01	7.80	7.23	6.51	12.37
12											
13	CONSTRUCTION	948.	1095.	1184.	1196.	1266.	1408.	1680.	1852.	1843.	1913.
14	PERCENTAGE CHANGE	14.28	15.51	8.20	0.94	5.92	11.17	19.31	10.24	-0.47	3.80
15											
16	MINING	149.	162.	249.	309.	266.	337.	396.	432.	541.	681.
17	PERCENTAGE CHANGE	4.87	9.12	53.27	24.34	-14.01	26.62	17.61	9.26	25.05	25.85
18											
19	TRADE	3390.	3814.	4122.	4541.	5069.	5582.	6300.	6972.	7224.	7947.
20	PERCENTAGE CHANGE	14.16	12.50	8.07	10.16	11.64	10.12	12.86	10.67	3.61	10.02
21											
22	SERVICES	2077.	2368.	2568.	2841.	3194.	3503.	4027.	4624.	5175.	5877.
23	PERCENTAGE CHANGE	12.47	14.03	8.43	10.62	12.43	9.67	14.99	14.81	11.91	13.57
24											
25	FINANCE, INSURANCE & REAL ESTATE	2447.	2779.	3052.	3248.	3605.	4089.	4654.	5224.	5668.	6062.
26	PERCENTAGE CHANGE	11.67	13.56	9.84	6.40	11.01	13.42	13.81	12.26	8.50	6.94
27											
28	TRANS., COMM. & PUBLIC UTILITIES	1485.	1672.	1841.	1986.	2299.	2640.	3072.	3349.	3660.	4110.
29	PERCENTAGE CHANGE	14.15	12.60	10.11	7.87	15.77	14.83	16.37	9.02	9.28	12.28
30											
31	GOVERNMENT	2282.	2504.	2788.	3139.	3451.	3961.	4568.	5011.	5563.	5979.
32	PERCENTAGE CHANGE	12.94	9.72	11.36	12.55	9.95	14.80	15.32	9.71	11.01	7.47
33											
34	FEDERAL	886.	930.	1036.	1170.	1302.	1497.	1774.	1935.	2154.	2357.
35	PERCENTAGE CHANGE	13.58	4.99	11.33	12.97	11.29	15.00	18.51	9.04	11.35	9.42
36											
37	STATE & LOCAL	1396.	1574.	1753.	1969.	2149.	2464.	2794.	3077.	3409.	3622.
38	PERCENTAGE CHANGE	12.54	12.72	11.37	12.31	9.15	14.67	13.38	10.13	10.81	6.24
39											
40	AGRICULTURE	537.	727.	643.	592.	735.	703.	887.	1012.	769.	977.
41	PERCENTAGE CHANGE	13.89	35.43	-11.59	-7.93	24.26	-4.42	26.18	14.12	-24.04	27.11
42											
43	PER CAPITA GROSS STATE PRODUCT ($)	5131.	5774.	6190.	6369.	7071.	7925.	8882.	9625.	10002.	11090.
44	PERCENTAGE CHANGE	11.22	12.53	7.20	2.89	11.01	12.08	12.07	8.37	3.92	10.88

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 3: TENNESSEE DURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TOTAL DURABLE GOODS	3334.	3857.	4192.	3763.	4653.	5500.	6324.	6872.	6766.	7694.
2	PERCENTAGE CHANGE	19.24	15.69	8.70	-10.24	23.67	18.18	14.98	8.67	-1.54	13.71
3											
4	LUMBER AND WOOD PRODUCTS	196.	222.	181.	152.	217.	262.	294.	337.	310.	299.
5	PERCENTAGE CHANGE	68.64	13.19	-18.59	-15.98	43.03	20.33	12.39	14.59	-8.12	-3.43
6											
7	FURNITURE AND FIXTURES	286.	306.	292.	264.	327.	381.	407.	406.	385.	427.
8	PERCENTAGE CHANGE	25.12	6.70	-4.48	-9.70	24.20	16.43	6.87	-0.30	-5.30	10.88
9											
10	STONE, CLAY AND GLASS	358.	401.	407.	371.	450.	447.	629.	624.	567.	587.
11	PERCENTAGE CHANGE	23.24	12.09	1.30	-8.76	21.25	-0.69	40.82	-0.76	-9.08	3.36
12											
13	PRIMARY METALS	271.	390.	512.	382.	451.	525.	572.	647.	683.	773.
14	PERCENTAGE CHANGE	10.82	44.29	31.21	-25.31	17.83	16.55	8.95	13.13	5.42	13.24
15											
16	FABRICATED METAL PRODUCTS	448.	533.	575.	636.	705.	833.	922.	1033.	1060.	1154.
17	PERCENTAGE CHANGE	27.38	18.97	7.97	10.46	10.89	18.17	10.65	12.05	2.64	8.84
18											
19	NONELECTRICAL MACHINERY	518.	690.	817.	715.	882.	1119.	1195.	1355.	1383.	1550.
20	PERCENTAGE CHANGE	18.72	33.12	18.38	-12.41	23.34	26.82	6.86	13.31	2.13	12.04
21											
22	ELECTRICAL MACHINERY	692.	727.	638.	613.	776.	954.	1144.	1251.	1266.	1473.
23	PERCENTAGE CHANGE	11.52	4.98	-12.27	-3.87	26.55	23.02	19.91	9.38	1.15	16.38
24											
25	TRANSPORTATION EQUIPMENT	380.	383.	521.	344.	525.	687.	823.	859.	747.	998.
26	PERCENTAGE CHANGE	24.57	0.84	36.16	-34.09	52.66	30.86	19.84	4.40	-12.99	33.56
27											
28	OTHER DURABLE GOODS	184.	205.	250.	286.	321.	293.	337.	360.	366.	434.
29	PERCENTAGE CHANGE	-8.85	11.12	21.92	14.66	12.12	-8.85	15.24	6.73	1.60	18.79
30											

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 4: TENNESSEE NONDURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	NONDURABLE GOODS	4328.	4916.	5372.	5527.	6070.	7164.	7722.	8281.	8819.	9910.
2	PERCENTAGE CHANGE	10.07	13.58	9.27	2.89	9.84	18.01	7.80	7.23	6.51	12.37
3											
4	FOOD	690.	796.	925.	983.	1118.	1280.	1410.	1485.	1597.	1783.
5	PERCENTAGE CHANGE	7.64	15.37	16.19	6.28	13.72	14.46	10.15	5.37	7.51	11.63
6											
7	TEXTILES	340.	373.	383.	346.	369.	426.	436.	445.	470.	517.
8	PERCENTAGE CHANGE	-2.61	9.79	2.63	-9.66	6.67	15.52	2.20	2.15	5.58	10.05
9											
10	APPAREL	589.	646.	637.	653.	819.	919.	932.	981.	1036.	1134.
11	PERCENTAGE CHANGE	27.58	9.57	-1.41	2.61	25.35	12.25	1.45	5.19	5.65	9.43
12											
13	PAPER	361.	432.	503.	466.	549.	618.	651.	736.	765.	837.
14	PERCENTAGE CHANGE	20.22	19.81	16.35	-7.27	17.73	12.60	5.34	12.92	3.98	9.46
15											
16	PRINTING AND PUBLISHING	274.	332.	391.	418.	419.	510.	585.	640.	695.	777.
17	PERCENTAGE CHANGE	7.44	20.99	17.65	6.96	0.19	21.76	14.87	9.34	8.54	11.87
18											
19	CHEMICALS	1396.	1568.	1709.	1827.	1919.	2276.	2434.	2605.	2812.	3217.
20	PERCENTAGE CHANGE	0.93	12.36	8.94	6.94	5.02	18.59	6.94	7.03	7.94	14.43
21											
22	RUBBER AND PLASTICS	414.	481.	488.	472.	491.	681.	789.	849.	809.	954.
23	PERCENTAGE CHANGE	37.65	16.18	1.43	-3.36	4.03	38.82	15.88	7.55	-4.76	18.02
24											
25	OTHER NONDURABLE GOODS	263.	287.	336.	361.	387.	453.	484.	539.	636.	690.
26	PERCENTAGE CHANGE	9.43	8.81	17.35	7.35	7.18	17.19	6.82	11.41	17.89	8.46

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 5: TENNESSEE GROSS STATE PRODUCT BY SECTOR (MILLIONS OF 1972 DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	GROSS STATE PRODUCT	20976.1	22878.6	23011.8	21838.0	23460.3	25160.4	26735.0	27544.5	26731.3	27270.9
2	PERCENTAGE CHANGE	9.83	9.07	0.58	-5.10	7.43	7.25	6.26	3.03	-2.95	2.02
3											
4	MANUFACTURING	7661.9	8777.9	8797.9	7574.7	8426.7	9370.1	9864.9	10133.5	9630.1	9965.8
5	PERCENTAGE CHANGE	14.17	14.57	0.23	-13.90	11.25	11.20	5.28	2.72	-4.97	3.49
6											
7	DURABLE GOODS	3333.6	3802.6	3861.2	3023.1	3608.6	3971.1	4313.5	4450.3	4074.6	4299.8
8	PERCENTAGE CHANGE	17.49	14.07	1.54	-21.70	19.37	10.05	8.62	3.17	-8.44	5.53
9											
10	NONDURABLE GOODS	4328.3	4975.3	4936.7	4551.6	4818.1	5399.0	5551.3	5683.2	5555.5	5666.0
11	PERCENTAGE CHANGE	11.74	14.95	-0.78	-7.80	5.86	12.06	2.82	2.38	-2.25	1.99
12											
13	CONSTRUCTION	947.7	992.5	912.5	826.3	872.1	893.3	966.4	931.9	810.1	782.1
14	PERCENTAGE CHANGE	5.71	4.72	-8.06	-9.45	5.55	2.42	8.19	-3.58	-13.07	-3.45
15											
16	MINING	148.6	143.0	148.4	150.2	118.2	138.7	152.8	134.9	124.0	119.4
17	PERCENTAGE CHANGE	-0.92	-3.76	3.76	1.17	-21.29	17.33	10.21	-11.73	-8.05	-3.76
18											
19	TRADE	3390.3	3634.8	3533.4	3576.0	3830.1	4001.4	4253.6	4353.3	4128.7	4210.5
20	PERCENTAGE CHANGE	11.69	7.21	-2.79	1.21	7.11	4.47	6.30	2.35	-5.16	1.98
21											
22	SERVICES	2076.8	2240.6	2266.9	2265.7	2372.4	2456.2	2637.5	2797.4	2855.8	2987.7
23	PERCENTAGE CHANGE	8.23	7.89	1.17	-0.05	4.71	3.53	7.38	6.06	2.09	4.62
24											
25	FINANCE, INSURANCE & REAL ESTATE	2447.0	2663.7	2787.9	2823.6	2943.6	3074.4	3191.8	3344.4	3328.4	3294.3
26	PERCENTAGE CHANGE	7.41	8.86	4.67	1.28	4.25	4.44	3.82	4.78	-0.48	-1.02
27											
28	TRANS., COMM. & PUBLIC UTILITIES	1484.7	1618.2	1676.1	1660.6	1786.8	1933.1	2133.4	2237.6	2216.8	2229.5
29	PERCENTAGE CHANGE	9.45	8.99	3.58	-0.92	7.59	8.19	10.36	4.89	-0.93	0.58
30											
31	GOVERNMENT	2282.3	2347.1	2460.9	2553.7	2595.9	2811.9	3042.1	3128.1	3240.0	3186.5
32	PERCENTAGE CHANGE	4.03	2.84	4.85	3.77	1.65	8.32	8.19	2.83	3.58	-1.65
33											
34	FEDERAL	886.0	887.5	921.2	966.7	996.1	1093.2	1214.1	1240.9	1289.0	1290.2
35	PERCENTAGE CHANGE	0.99	0.17	3.80	4.94	3.03	9.75	11.06	2.21	3.88	0.09
36											
37	STATE & LOCAL	1396.3	1459.6	1539.6	1587.0	1599.9	1718.7	1828.0	1887.2	1951.0	1896.3
38	PERCENTAGE CHANGE	6.05	4.53	5.48	3.08	0.81	7.43	6.36	3.24	3.38	-2.80
39											
40	AGRICULTURE	536.9	460.8	427.9	407.2	514.5	484.4	492.5	483.3	402.5	495.1
41	PERCENTAGE CHANGE	-3.72	-14.18	-7.13	-4.83	26.35	-6.45	2.32	-1.87	-16.73	23.01
42											
43	PER CAPITA GROSS STATE PRODUCT ($)	5131.	5529.	5476.	5125.	5419.	5716.	5992.	6076.	5809.	5913.
44	PERCENTAGE CHANGE	7.74	7.75	-0.95	-6.42	5.74	5.47	4.83	1.41	-4.41	1.80

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 6: TENNESSEE DURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF 1972 DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TOTAL DURABLE GOODS	3333.6	3802.6	3861.2	3023.1	3608.6	3971.1	4313.5	4450.3	4074.6	4299.8
2	PERCENTAGE CHANGE	17.49	14.07	1.54	-21.70	19.37	10.05	8.62	3.17	-8.44	5.53
3											
4	LUMBER AND WOOD PRODUCTS	196.3	194.9	156.9	136.3	169.0	180.5	173.7	186.9	179.8	183.2
5	PERCENTAGE CHANGE	56.67	-0.71	-19.51	-13.11	24.00	6.80	-3.81	7.60	-3.80	1.90
6											
7	FURNITURE AND FIXTURES	286.4	293.9	266.6	216.6	266.0	293.9	290.2	280.3	253.4	270.1
8	PERCENTAGE CHANGE	28.75	2.60	-9.28	-18.76	22.80	10.51	-1.27	-3.40	-9.60	6.60
9											
10	STONE, CLAY AND GLASS	358.0	393.4	373.3	300.1	340.2	300.1	394.0	366.1	317.7	324.4
11	PERCENTAGE CHANGE	19.42	9.90	-5.12	-19.61	13.36	-11.77	31.29	-7.10	-13.20	2.10
12											
13	PRIMARY METALS	270.5	397.4	418.7	260.2	298.3	318.4	312.6	331.0	296.2	301.6
14	PERCENTAGE CHANGE	2.06	46.93	5.36	-37.86	14.64	6.73	-1.82	5.90	-10.50	1.80
15											
16	FABRICATED METAL PRODUCTS	448.0	517.0	481.6	446.1	487.8	556.8	569.0	600.8	561.2	549.4
17	PERCENTAGE CHANGE	23.31	15.40	-6.85	-7.37	9.35	14.14	2.18	5.60	-6.60	-2.10
18											
19	NONELECTRICAL MACHINERY	518.1	682.2	764.5	568.5	679.6	781.8	800.7	855.1	816.6	846.0
20	PERCENTAGE CHANGE	17.65	31.67	12.07	-25.64	19.53	15.04	2.42	6.80	-4.50	3.60
21											
22	ELECTRICAL MACHINERY	692.2	728.9	610.0	521.1	640.4	716.2	846.1	914.6	859.7	934.5
23	PERCENTAGE CHANGE	11.74	5.30	-16.30	-14.58	22.89	11.84	18.13	8.10	-6.00	8.70
24											
25	TRANSPORTATION EQUIPMENT	379.8	389.0	540.9	315.0	453.3	581.9	664.0	647.4	547.1	629.7
26	PERCENTAGE CHANGE	27.09	2.42	39.04	-41.77	43.93	28.37	14.11	-2.50	-15.50	15.10
27											
28	OTHER DURABLE GOODS	184.3	205.9	248.7	259.3	274.0	241.4	263.4	268.1	242.9	260.9
29	PERCENTAGE CHANGE	-9.10	11.71	20.79	4.25	5.68	-11.89	9.09	1.80	-9.40	7.40

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 7: TENNESSEE NONDURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF 1972 DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TOTAL NONDURABLE GOODS	4328.3	4975.3	4936.7	4551.6	4818.1	5399.0	5551.3	5683.2	5555.5	5666.0
2	PERCENTAGE CHANGE	11.74	14.95	-0.78	-7.80	5.86	12.06	2.82	2.38	-2.25	1.99
3											
4	FOOD	690.2	859.9	865.5	749.5	874.3	929.5	974.3	1013.3	1054.8	1064.3
5	PERCENTAGE CHANGE	12.70	24.59	0.65	-13.41	16.65	6.31	4.82	4.00	4.10	0.90
6											
7	TEXTILES	340.0	362.1	308.9	287.2	295.6	341.5	340.5	330.3	326.7	334.9
8	PERCENTAGE CHANGE	-5.43	6.49	-14.67	-7.03	2.92	15.52	-0.27	-3.00	-1.10	2.50
9											
10	APPAREL	589.3	658.9	637.9	615.1	717.6	754.0	755.0	750.4	744.4	739.2
11	PERCENTAGE CHANGE	40.47	11.81	-3.18	-3.58	16.68	5.06	0.13	-0.60	-0.80	-0.70
12											
13	PAPER	360.9	419.8	442.9	352.1	395.4	431.5	421.1	438.3	419.1	424.9
14	PERCENTAGE CHANGE	18.90	16.32	5.50	-20.50	12.30	9.15	-2.43	4.10	-4.40	1.40
15											
16	PRINTING AND PUBLISHING	274.4	323.6	355.7	343.6	314.5	351.5	373.9	379.5	381.4	406.6
17	PERCENTAGE CHANGE	4.54	17.93	9.93	-3.41	-8.47	11.77	6.36	1.50	0.50	6.60
18											
19	CHEMICALS	1396.0	1581.1	1551.9	1476.0	1487.6	1699.6	1750.9	1813.9	1759.5	1789.4
20	PERCENTAGE CHANGE	1.13	13.26	-1.85	-4.89	0.79	14.25	3.02	3.60	-3.00	1.70
21											
22	RUBBER AND PLASTICS	414.2	486.1	461.3	407.3	403.9	529.7	589.1	587.9	522.7	553.5
23	PERCENTAGE CHANGE	35.72	17.35	-5.09	-11.71	-0.85	31.16	11.21	-0.20	-11.10	5.90
24											
25	OTHER NONDURABLE GOODS	263.3	283.9	312.5	320.8	329.2	361.8	346.6	369.5	346.9	353.2
26	PERCENTAGE CHANGE	14.17	7.82	10.08	2.66	2.63	9.88	-4.19	6.60	-6.10	1.80

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 8: TENNESSEE EMPLOYMENT BY SECTOR (THOUSANDS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	NONAGRICULTURAL JOBS	1450.1	1531.1	1558.2	1505.7	1577.4	1648.1	1737.0	1777.3	1747.2	1745.5
2	PERCENTAGE CHANGE	6.88	5.59	1.77	-3.37	4.76	4.48	5.39	2.32	-1.69	-0.10
3											
4	MANUFACTURING	489.2	519.4	513.3	459.0	487.2	507.5	526.0	524.7	502.7	506.7
5	PERCENTAGE CHANGE	6.46	6.17	-1.17	-10.58	6.14	4.17	3.65	-0.25	-4.19	0.80
6											
7	CONSTRUCTION	78.6	86.1	87.8	76.0	75.2	78.4	87.3	89.2	81.2	76.6
8	PERCENTAGE CHANGE	11.65	9.54	1.97	-13.44	-1.05	4.26	11.35	2.18	-8.97	-5.67
9											
10	MINING	7.1	7.0	8.3	9.5	9.4	9.9	10.8	10.5	10.1	10.2
11	PERCENTAGE CHANGE	-1.39	-1.41	18.57	14.46	-1.05	5.32	9.09	-2.78	-3.81	0.99
12											
13	TRADE	294.3	312.0	321.0	320.8	339.8	357.2	379.1	388.7	379.7	372.8
14	PERCENTAGE CHANGE	9.41	6.01	2.88	-0.06	5.92	5.12	6.13	2.53	-2.32	-1.82
15											
16	SERVICES	209.8	221.9	227.6	229.4	240.0	254.5	270.7	285.4	291.0	306.8
17	PERCENTAGE CHANGE	8.59	5.77	2.57	0.79	4.62	6.04	6.37	5.43	1.96	5.43
18											
19	FINANCE, INSURANCE & REAL ESTATE	61.2	66.1	69.5	68.9	69.8	71.1	74.3	77.6	78.7	78.1
20	PERCENTAGE CHANGE	4.79	8.01	5.14	-0.86	1.31	1.86	4.50	4.44	1.42	-0.76
21											
22	TRANS., COMM. & PUBLIC UTILITIES	69.3	72.4	74.3	70.8	73.3	78.3	83.2	87.3	86.6	85.6
23	PERCENTAGE CHANGE	3.12	4.47	2.62	-4.71	3.53	6.82	6.26	4.93	-0.80	-1.15
24											
25	GOVERNMENT	240.6	246.2	256.4	271.3	282.7	291.2	305.6	313.9	317.2	308.7
26	PERCENTAGE CHANGE	3.75	2.33	4.14	5.81	4.20	3.01	4.94	2.72	1.05	-2.68
27											
28	FEDERAL, CIVILIAN	51.7	52.0	55.8	58.5	60.6	64.5	70.4	73.9	76.7	75.0
29	PERCENTAGE CHANGE	10.00	0.58	7.31	4.84	3.59	6.44	9.15	4.97	3.79	-2.22
30											
31	STATE & LOCAL	188.9	194.2	200.6	212.8	222.1	226.7	235.2	240.0	240.5	233.7
32	PERCENTAGE CHANGE	2.16	2.81	3.30	6.08	4.37	2.07	3.75	2.04	0.21	-2.83
33											
34	TOTAL EMPLOYMENT (THOUS. PERSONS)	1664.0	1683.0	1728.0	1658.0	1757.0	1822.0	1856.0	1924.0	1930.0	1919.0
35	PERCENTAGE CHANGE	4.85	1.14	2.67	-4.05	5.97	3.70	1.87	3.66	0.31	-0.57
36											
37	UNEMPLOYMENT (THOUS. PERSONS)	64.0	68.0	92.0	151.0	112.0	123.0	113.0	119.0	152.0	192.0
38	PERCENTAGE CHANGE	-17.95	6.25	35.29	64.13	-25.83	9.82	-8.13	5.31	27.73	26.32
39											
40	UNEMPLOYMENT RATE (PERCENT)	3.7	3.9	5.1	8.3	6.0	6.3	5.7	5.8	7.3	9.1
41											
42	CIVILIAN LABOR FORCE (THOUS. PERSONS)	1728.0	1752.0	1820.0	1809.0	1869.0	1945.0	1969.0	2043.0	2082.0	2111.0
43	PERCENTAGE CHANGE	3.78	1.39	3.88	-0.60	3.32	4.07	1.23	3.76	1.91	1.39

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 9: TENNESSEE DURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TOTAL DURABLE GOODS	212.4	231.4	229.1	194.6	208.9	223.0	238.2	240.8	223.2	224.2
2	PERCENTAGE CHANGE	12.98	8.95	-0.99	-15.06	7.35	6.75	6.82	1.09	-7.31	0.45
3											
4	LUMBER AND WOOD PRODUCTS	18.8	19.7	19.4	16.1	18.0	19.2	20.0	21.4	18.7	17.3
5	PERCENTAGE CHANGE	23.68	4.79	-1.52	-17.01	11.80	6.67	4.17	7.00	-12.62	-7.49
6											
7	FURNITURE AND FIXTURES	27.9	28.3	25.7	22.5	24.2	24.7	26.1	24.2	21.5	22.7
8	PERCENTAGE CHANGE	13.41	1.43	-9.19	-12.45	7.56	2.07	5.67	-7.28	-11.16	5.58
9											
10	STONE, CLAY AND GLASS	16.5	18.1	18.2	15.5	16.1	17.0	17.5	16.8	14.7	13.9
11	PERCENTAGE CHANGE	13.79	9.70	0.55	-14.84	3.87	5.59	2.94	-4.00	-12.50	-5.44
12											
13	PRIMARY METALS	17.7	18.5	20.0	17.4	18.2	19.2	19.7	20.9	19.0	19.1
14	PERCENTAGE CHANGE	-1.12	4.52	8.11	-13.00	4.60	5.49	2.60	6.09	-9.09	0.53
15											
16	FABRICATED METAL PRODUCTS	31.2	34.0	33.7	31.3	30.5	32.3	34.3	35.1	32.8	30.5
17	PERCENTAGE CHANGE	12.23	8.97	-0.88	-7.12	-2.56	5.90	6.19	2.33	-6.55	-7.01
18											
19	NONELECTRICAL MACHINERY	27.5	32.8	33.7	27.9	30.3	34.1	36.5	36.5	35.0	36.2
20	PERCENTAGE CHANGE	32.21	19.27	2.74	-17.21	8.60	12.54	7.04	0.0	-4.11	3.43
21											
22	ELECTRICAL MACHINERY	38.5	41.9	39.8	31.4	34.5	38.0	41.2	41.1	40.2	42.1
23	PERCENTAGE CHANGE	16.31	8.83	-5.01	-21.11	9.87	10.14	8.42	-0.24	-2.19	4.73
24											
25	TRANSPORTATION EQUIPMENT	19.6	22.2	22.5	17.6	20.4	21.5	25.0	26.0	23.2	23.8
26	PERCENTAGE CHANGE	16.67	13.27	1.35	-21.78	15.91	5.39	16.28	4.00	-10.77	2.59
27											
28	OTHER DURABLE GOODS	14.7	15.9	16.1	14.9	16.3	17.0	17.9	18.8	18.1	18.6
29	PERCENTAGE CHANGE	-15.03	8.16	1.26	-7.45	9.40	4.29	5.29	5.03	-3.72	2.76

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 10: TENNESSEE NONDURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TOTAL NONDURABLE GOODS	276.8	288.0	284.2	264.4	278.7	284.5	287.8	283.9	279.5	282.5
2	PERCENTAGE CHANGE	1.95	4.05	-1.32	-6.97	5.41	2.08	1.16	-1.36	-1.55	1.07
3											
4	FOOD	36.6	38.0	38.4	38.3	39.8	40.6	40.1	39.5	39.0	38.2
5	PERCENTAGE CHANGE	2.23	3.83	1.05	-0.26	3.92	2.01	-1.23	-1.50	-1.27	-2.05
6											
7	TEXTILES	32.4	33.2	31.0	27.1	29.3	28.5	29.0	27.2	26.3	26.9
8	PERCENTAGE CHANGE	-5.26	2.47	-6.63	-12.58	8.12	-2.73	1.75	-6.21	-3.31	2.28
9											
10	APPAREL	71.8	76.0	73.9	66.1	72.0	72.3	71.2	68.3	69.4	69.5
11	PERCENTAGE CHANGE	6.85	5.85	-2.76	-10.55	8.93	0.42	-1.52	-4.07	1.61	0.14
12											
13	PAPER	16.6	17.5	17.4	15.2	15.7	16.6	17.4	18.2	17.7	17.8
14	PERCENTAGE CHANGE	15.28	5.42	-0.57	-12.64	3.29	5.73	4.82	4.60	-2.75	0.56
15											
16	PRINTING AND PUBLISHING	21.1	21.9	22.6	22.4	23.9	25.3	26.1	26.6	26.9	27.2
17	PERCENTAGE CHANGE	1.44	3.79	3.20	-0.89	6.70	5.86	3.16	1.92	1.13	1.12
18											
19	CHEMICALS	55.6	57.2	58.4	55.2	56.5	57.3	57.7	58.5	58.2	58.7
20	PERCENTAGE CHANGE	-4.79	2.88	2.10	-5.48	2.36	1.42	0.70	1.39	-0.51	0.86
21											
22	RUBBER AND PLASTICS	15.5	17.7	18.4	16.7	16.7	20.6	22.8	23.4	20.4	21.0
23	PERCENTAGE CHANGE	7.64	14.19	3.95	-9.24	0.0	23.35	10.68	2.63	-12.82	2.94
24											
25	OTHER NONDURABLE GOODS	27.2	26.5	24.1	23.4	24.8	23.3	23.5	22.2	21.6	23.2
26	PERCENTAGE CHANGE	3.42	-2.57	-9.06	-2.90	5.98	-6.05	0.86	-5.53	-2.70	7.41

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 11: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY BY SECTOR (DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	ALL SECTORS	6872.	7336.	7964.	8600.	9170.	9880.	10733.	11662.	12795.	13997.
2	PERCENTAGE CHANGE	5.79	6.75	8.57	7.99	6.63	7.74	8.64	8.65	9.72	9.39
3											
4	MANUFACTURING	7179.	7616.	8387.	9154.	9858.	10675.	11540.	12681.	13905.	15183.
5	PERCENTAGE CHANGE	5.69	6.09	10.13	9.14	7.69	8.29	8.10	9.89	9.65	9.20
6											
7	DURABLE GOODS	7164.	7659.	8524.	9246.	9962.	10847.	11657.	12865.	14073.	15552.
8	PERCENTAGE CHANGE	2.46	6.91	11.29	8.47	7.74	8.89	7.46	10.36	9.39	10.51
9											
10	NONDURABLE GOODS	7191.	7581.	8277.	9087.	9767.	10541.	11443.	12533.	13770.	14891.
11	PERCENTAGE CHANGE	8.05	5.43	9.18	9.78	7.48	7.93	8.56	9.52	9.87	8.14
12											
13	CONSTRUCTION	7408.	7714.	8531.	9697.	9922.	10563.	11253.	12271.	13561.	14980.
14	PERCENTAGE CHANGE	0.56	4.14	10.59	13.67	2.32	6.46	6.53	9.05	10.52	10.46
15											
16	MINING	8256.	8969.	9662.	11334.	11272.	12585.	13989.	15507.	16957.	18383.
17	PERCENTAGE CHANGE	11.42	8.64	7.73	17.31	-0.55	11.65	11.16	10.85	9.35	8.41
18											
19	TRADE	5932.	6295.	6788.	7269.	7757.	8185.	8755.	9501.	10383.	11388.
20	PERCENTAGE CHANGE	4.30	6.11	7.83	7.09	6.71	5.52	6.96	8.52	9.28	9.68
21											
22	SERVICES	6014.	6408.	6919.	7497.	8030.	8393.	9230.	10080.	11323.	12289.
23	PERCENTAGE CHANGE	3.94	6.55	7.97	8.36	7.11	4.52	9.97	9.21	12.33	8.53
24											
25	FINANCE, INSURANCE & REAL ESTATE	7560.	7992.	8530.	9089.	9820.	10673.	11562.	12560.	13813.	15227.
26	PERCENTAGE CHANGE	7.39	5.72	6.73	6.55	8.05	8.69	8.32	8.64	9.97	10.24
27											
28	TRANS., COMM. & PUBLIC UTILITIES	9561.	10461.	11265.	12085.	13335.	14274.	15700.	17074.	18568.	20592.
29	PERCENTAGE CHANGE	9.87	9.41	7.69	7.28	10.34	7.04	10.00	8.75	8.75	10.90
30											
31	GOVERNMENT	7525.	8139.	8647.	9158.	9600.	10729.	11784.	12587.	13734.	14890.
32	PERCENTAGE CHANGE	8.94	8.15	6.24	5.92	4.82	11.77	9.83	6.81	9.12	8.42
33											
34	FEDERAL, CIVILIAN	11132.	12046.	12480.	13496.	14618.	16168.	17803.	18576.	19735.	21518.
35	PERCENTAGE CHANGE	3.99	8.21	3.60	8.14	8.31	10.61	10.11	4.34	6.24	9.03
36											
37	STATE & LOCAL	6538.	7092.	7580.	7966.	8230.	9182.	9982.	10742.	11821.	12763.
38	PERCENTAGE CHANGE	10.02	8.47	6.88	5.09	3.32	11.56	8.72	7.61	10.04	7.98
39											
40	AGRICULTURE	2171.	2465.	2949.	3103.	3276.	3684.	4196.	4547.	4962.	6338.
41	PERCENTAGE CHANGE	8.82	13.54	19.62	5.21	5.59	12.45	13.90	8.37	9.13	27.71

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 12: TENNESSEE DURABLE GOODS MANUFACTURING AVERAGE ANNUAL WAGE AND SALARY
(DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TOTAL DURABLE GOODS	7164.	7659.	8524.	9246.	9962.	10847.	11657.	12865.	14073.	15552.
2	PERCENTAGE CHANGE	2.46	6.91	11.29	8.47	7.74	8.89	7.46	10.36	9.39	10.51
3											
4	LUMBER AND WOOD PRODUCTS	4491.	4612.	5245.	6544.	7098.	7705.	8295.	9018.	9983.	10792.
5	PERCENTAGE CHANGE	-10.28	2.70	13.72	24.77	8.46	8.56	7.65	8.72	10.70	8.10
6											
7	FURNITURE AND FIXTURES	5736.	6205.	6851.	7087.	7799.	8386.	8741.	9590.	10365.	10841.
8	PERCENTAGE CHANGE	1.71	8.16	10.43	3.43	10.05	7.53	4.23	9.72	8.08	4.59
9											
10	STONE, CLAY AND GLASS	8276.	9465.	10093.	10340.	12124.	13479.	14823.	15378.	16635.	18460.
11	PERCENTAGE CHANGE	0.47	14.38	6.63	2.45	17.26	11.17	9.98	3.74	8.17	10.97
12											
13	PRIMARY METALS	9548.	9622.	10570.	10805.	12163.	13802.	14851.	16009.	18256.	19692.
14	PERCENTAGE CHANGE	6.71	0.77	9.85	2.23	12.57	13.47	7.60	7.80	14.04	7.87
15											
16	FABRICATED METAL PRODUCTS	7518.	7440.	8134.	10503.	10809.	11450.	12154.	13267.	14799.	17021.
17	PERCENTAGE CHANGE	-1.87	-1.04	9.33	29.14	2.91	5.93	6.15	9.16	11.55	15.01
18											
19	NONELECTRICAL MACHINERY	7001.	7998.	9654.	10680.	11150.	11822.	12702.	14751.	16133.	16885.
20	PERCENTAGE CHANGE	-9.79	14.25	20.70	10.63	4.40	6.03	7.44	16.13	9.37	4.66
21											
22	ELECTRICAL MACHINERY	6648.	7310.	7889.	8519.	9469.	10221.	10842.	12431.	13118.	14378.
23	PERCENTAGE CHANGE	4.10	9.96	7.91	7.99	11.16	7.94	6.07	14.66	5.53	9.60
24											
25	TRANSPORTATION EQUIPMENT	8080.	8351.	9038.	9493.	10216.	11486.	12738.	13761.	15230.	18672.
26	PERCENTAGE CHANGE	15.68	3.35	8.23	5.03	7.61	12.44	10.90	8.03	10.68	22.60
27											
28	OTHER DURABLE GOODS	8857.	9410.	10133.	8381.	8915.	9491.	10334.	10905.	11573.	12966.
29	PERCENTAGE CHANGE	31.06	6.24	7.69	-17.29	6.37	6.46	8.87	5.53	6.12	12.03

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 13: TENNESSEE NONDURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY (DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TOTAL NONDURABLE GOODS	7191.	7581.	8277.	9087.	9767.	10541.	11443.	12533.	13770.	14891.
2	PERCENTAGE CHANGE	8.05	5.43	9.18	9.78	7.48	7.93	8.56	9.52	9.87	8.14
3											
4	FOOD	7691.	8160.	9248.	10075.	10919.	11524.	12438.	13535.	14766.	16031.
5	PERCENTAGE CHANGE	6.69	6.10	13.34	8.94	8.37	5.54	7.94	8.82	9.09	8.57
6											
7	TEXTILES	6286.	6617.	7141.	7167.	7713.	8287.	9106.	9813.	11104.	11627.
8	PERCENTAGE CHANGE	14.95	5.27	7.92	0.35	7.62	7.45	9.88	7.77	13.15	4.71
9											
10	APPAREL	4513.	4761.	5121.	5529.	6107.	6417.	6977.	7730.	8172.	8801.
11	PERCENTAGE CHANGE	7.25	5.50	7.58	7.95	10.46	5.07	8.73	10.79	5.72	7.70
12											
13	PAPER	7843.	8298.	9010.	10949.	12281.	13385.	14581.	15682.	17636.	19047.
14	PERCENTAGE CHANGE	-4.06	5.80	8.58	21.53	12.16	8.99	8.94	7.55	12.46	8.00
15											
16	PRINTING AND PUBLISHING	7111.	7488.	7932.	8066.	8630.	9097.	9934.	10729.	11686.	12911.
17	PERCENTAGE CHANGE	11.49	5.30	5.92	1.70	6.99	5.41	9.20	8.01	8.92	10.48
18											
19	CHEMICALS	10737.	11312.	12237.	13604.	14838.	15838.	17126.	18522.	20609.	22181.
20	PERCENTAGE CHANGE	11.15	5.36	8.17	11.18	9.07	6.74	8.13	8.15	11.27	7.63
21											
22	RUBBER AND PLASTICS	9068.	9580.	10030.	11423.	11879.	13625.	14270.	15462.	17301.	18781.
23	PERCENTAGE CHANGE	13.43	5.64	4.70	13.88	4.00	14.70	4.74	8.35	11.90	8.55
24											
25	OTHER NONDURABLE GOODS	6011.	6265.	6731.	7187.	7496.	8174.	8821.	9566.	10866.	12208.
26	PERCENTAGE CHANGE	5.85	4.23	7.43	6.78	4.30	9.05	7.91	8.44	13.59	12.35

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 14: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY BY SECTOR (1972 DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	ALL SECTORS	6872.	6940.	6848.	6869.	6961.	7090.	7200.	7177.	7141.	7196.
2	PERCENTAGE CHANGE	2.09	0.99	-1.33	0.31	1.34	1.85	1.55	-0.31	-0.51	0.77
3											
4	MANUFACTURING	7179.	7205.	7212.	7312.	7484.	7661.	7741.	7805.	7760.	7806.
5	PERCENTAGE CHANGE	1.99	0.37	0.09	1.38	2.35	2.37	1.04	0.83	-0.57	0.59
6											
7	DURABLE GOODS	7164.	7246.	7329.	7385.	7562.	7784.	7819.	7918.	7855.	7996.
8	PERCENTAGE CHANGE	-1.12	1.15	1.15	0.76	2.40	2.94	0.45	1.26	-0.80	1.80
9											
10	NONDURABLE GOODS	7191.	7173.	7117.	7258.	7414.	7565.	7676.	7713.	7685.	7656.
11	PERCENTAGE CHANGE	4.27	-0.25	-0.77	1.98	2.15	2.03	1.47	0.48	-0.36	-0.38
12											
13	CONSTRUCTION	7408.	7298.	7335.	7745.	7532.	7580.	7548.	7552.	7569.	7702.
14	PERCENTAGE CHANGE	-2.96	-1.48	0.51	5.59	-2.75	0.64	-0.42	0.06	0.22	1.76
15											
16	MINING	8256.	8485.	8308.	9053.	8557.	9032.	9384.	9544.	9464.	9451.
17	PERCENTAGE CHANGE	7.52	2.78	-2.09	8.97	-5.48	5.55	3.90	1.71	-0.84	-0.13
18											
19	TRADE	5932.	5955.	5836.	5806.	5889.	5874.	5873.	5848.	5795.	5855.
20	PERCENTAGE CHANGE	0.65	0.39	-1.99	-0.52	1.42	-0.25	-0.02	-0.43	-0.90	1.03
21											
22	SERVICES	6014.	6063.	5949.	5988.	6096.	6023.	6192.	6204.	6320.	6318.
23	PERCENTAGE CHANGE	0.30	0.80	-1.87	0.66	1.80	-1.19	2.79	0.20	1.86	-0.02
24											
25	FINANCE, INSURANCE & REAL ESTATE	7560.	7561.	7334.	7259.	7455.	7660.	7755.	7730.	7709.	7829.
26	PERCENTAGE CHANGE	3.63	0.02	-3.00	-1.02	2.69	2.75	1.25	-0.32	-0.28	1.55
27											
28	TRANS., COMM. & PUBLIC UTILITIES	9561.	9897.	9686.	9653.	10123.	10243.	10532.	10509.	10363.	10587.
29	PERCENTAGE CHANGE	6.03	3.51	-2.13	-0.35	4.87	1.19	2.81	-0.22	-1.38	2.16
30											
31	GOVERNMENT	7525.	7700.	7435.	7315.	7287.	7700.	7905.	7747.	7665.	7656.
32	PERCENTAGE CHANGE	5.12	2.32	-3.44	-1.61	-0.38	5.66	2.66	-2.00	-1.05	-0.13
33											
34	FEDERAL, CIVILIAN	11132.	11396.	10731.	10780.	11097.	11603.	11942.	11433.	11015.	11063.
35	PERCENTAGE CHANGE	0.35	2.38	-5.84	0.45	2.94	4.56	2.92	-4.26	-3.66	0.44
36											
37	STATE & LOCAL	6538.	6710.	6518.	6363.	6248.	6589.	6696.	6612.	6597.	6562.
38	PERCENTAGE CHANGE	6.17	2.62	-2.86	-2.38	-1.80	5.47	1.62	-1.26	-0.22	-0.53
39											
40	AGRICULTURE	2171.	2333.	2536.	2478.	2487.	2644.	2815.	2799.	2770.	3258.
41	PERCENTAGE CHANGE	5.01	7.42	8.72	-2.27	0.36	6.30	6.46	-0.57	-1.04	17.65

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 15: TENNESSEE DURABLE GOODS MANUFACTURING AVERAGE ANNUAL WAGE AND SALARY
(1972 DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TOTAL DURABLE GOODS	7164.	7246.	7329.	7385.	7562.	7784.	7819.	7918.	7855.	7996.
2	PERCENTAGE CHANGE	-1.12	1.15	1.15	0.76	2.40	2.94	0.45	1.26	-0.80	1.80
3											
4	LUMBER AND WOOD PRODUCTS	4491.	4363.	4510.	5227.	5388.	5530.	5564.	5551.	5572.	5549.
5	PERCENTAGE CHANGE	-13.42	-2.84	3.36	15.90	3.09	2.62	0.62	-0.24	0.39	-0.42
6											
7	FURNITURE AND FIXTURES	5736.	5870.	5891.	5660.	5920.	6018.	5863.	5902.	5785.	5574.
8	PERCENTAGE CHANGE	-1.85	2.33	0.36	-3.92	4.59	1.65	-2.57	0.67	-1.99	-3.65
9											
10	STONE, CLAY AND GLASS	8276.	8955.	8678.	8259.	9204.	9673.	9943.	9465.	9285.	9491.
11	PERCENTAGE CHANGE	-3.05	8.21	-3.09	-4.84	11.44	5.10	2.80	-4.81	-1.90	2.22
12											
13	PRIMARY METALS	9548.	9103.	9088.	8630.	9233.	9905.	9962.	9853.	10189.	10125.
14	PERCENTAGE CHANGE	2.97	-4.67	-0.16	-5.04	6.99	7.27	0.57	-1.09	3.41	-0.63
15											
16	FABRICATED METAL PRODUCTS	7518.	7038.	6994.	8389.	8205.	8217.	8153.	8165.	8260.	8751.
17	PERCENTAGE CHANGE	-5.30	-6.38	-0.64	19.96	-2.19	0.14	-0.78	0.16	1.15	5.95
18											
19	NONELECTRICAL MACHINERY	7001.	7567.	8301.	8530.	8464.	8484.	8520.	9079.	9004.	8681.
20	PERCENTAGE CHANGE	-12.95	8.09	9.70	2.76	-0.78	0.23	0.43	6.56	-0.82	-3.58
21											
22	ELECTRICAL MACHINERY	6648.	6916.	6783.	6804.	7188.	7335.	7273.	7651.	7322.	7392.
23	PERCENTAGE CHANGE	0.45	4.03	-1.92	0.31	5.65	2.04	-0.85	5.20	-4.30	0.97
24											
25	TRANSPORTATION EQUIPMENT	8080.	7900.	7771.	7582.	7755.	8243.	8545.	8469.	8500.	9600.
26	PERCENTAGE CHANGE	11.63	-2.22	-1.63	-2.43	2.28	6.29	3.66	-0.88	0.36	12.94
27											
28	OTHER DURABLE GOODS	8857.	8902.	8713.	6694.	6768.	6811.	6932.	6712.	6459.	6666.
29	PERCENTAGE CHANGE	26.48	0.51	-2.13	-23.17	1.10	0.65	1.77	-3.17	-3.77	3.21
30											

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 16: TENNESSEE NONDURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY (1972 DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TOTAL NONDURABLE GOODS	7191.	7173.	7117.	7258.	7414.	7565.	7676.	7713.	7685.	7656.
2	PERCENTAGE CHANGE	4.27	-0.25	-0.77	1.98	2.15	2.03	1.47	0.48	-0.36	-0.38
3											
4	FOOD	7691.	7720.	7952.	8047.	8289.	8270.	8343.	8330.	8241.	8242.
5	PERCENTAGE CHANGE	2.95	0.38	3.01	1.19	3.00	-0.23	0.89	-0.16	-1.07	0.01
6											
7	TEXTILES	6286.	6261.	6141.	5724.	5855.	5947.	6108.	6040.	6197.	5978.
8	PERCENTAGE CHANGE	10.93	-0.40	-1.92	-6.78	2.28	1.58	2.71	-1.12	2.61	-3.54
9											
10	APPAREL	4513.	4504.	4404.	4416.	4636.	4605.	4680.	4757.	4561.	4525.
11	PERCENTAGE CHANGE	3.49	-0.19	-2.23	0.28	4.98	-0.67	1.64	1.65	-4.13	-0.78
12											
13	PAPER	7843.	7850.	7747.	8745.	9323.	9606.	9781.	9652.	9843.	9793.
14	PERCENTAGE CHANGE	-7.42	0.09	-1.32	12.89	6.60	3.03	1.82	-1.32	1.98	-0.51
15											
16	PRINTING AND PUBLISHING	7111.	7084.	6820.	6443.	6552.	6529.	6664.	6603.	6522.	6638.
17	PERCENTAGE CHANGE	7.59	-0.38	-3.73	-5.53	1.69	-0.35	2.07	-0.90	-1.23	1.77
18											
19	CHEMICALS	10737.	10702.	10522.	10866.	11264.	11366.	11488.	11399.	11502.	11404.
20	PERCENTAGE CHANGE	7.26	-0.32	-1.69	3.27	3.66	0.90	1.08	-0.77	0.90	-0.85
21											
22	RUBBER AND PLASTICS	9068.	9063.	8624.	9124.	9018.	9778.	9572.	9516.	9656.	9656.
23	PERCENTAGE CHANGE	9.46	-0.05	-4.84	5.79	-1.16	8.43	-2.10	-0.59	1.47	-0.00
24											
25	OTHER NONDURABLE GOODS	6011.	5928.	5787.	5740.	5691.	5866.	5917.	5887.	6064.	6277.
26	PERCENTAGE CHANGE	2.15	-1.39	-2.37	-0.81	-0.87	3.09	0.87	-0.50	3.00	3.50

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 17: TENNESSEE PERSONAL INCOME BY COMPONENTS

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TOTAL PERSONAL INCOME (MIL $)	14981.	17011.	18793.	20304.	22672.	25155.	28542.	31983.	35031.	38957.
2	PERCENTAGE CHANGE	12.15	13.55	10.47	8.04	11.66	10.95	13.46	12.06	9.53	11.21
3											
4	WAGES AND SALARIES	10318.	11579.	12790.	13313.	14859.	16726.	19106.	21241.	22949.	25044.
5	PERCENTAGE CHANGE	12.89	12.22	10.46	4.09	11.61	12.57	14.23	11.17	8.04	9.13
6											
7	OTHER LABOR INCOME	748.	855.	982.	1107.	1318.	1558.	1821.	2016.	2192.	2434.
8	PERCENTAGE CHANGE	21.08	14.27	14.87	12.77	19.04	18.25	16.83	10.72	8.72	11.07
9											
10	PROPRIETORS' INCOME	1392.	1667.	1489.	1475.	1746.	1712.	1972.	2126.	1694.	1876.
11	PERCENTAGE CHANGE	12.52	19.76	-10.68	-0.89	18.32	-1.94	15.23	7.77	-20.33	10.80
12											
13	PROPERTY INCOME	1631.	1879.	2223.	2426.	2598.	2962.	3376.	3996.	4860.	5916.
14	PERCENTAGE CHANGE	7.74	15.19	18.30	9.17	7.09	13.99	13.99	18.34	21.62	21.73
15											
16	TRANSFER PAYMENTS	1679.	1958.	2377.	3092.	3367.	3597.	3892.	4469.	5344.	6029.
17	PERCENTAGE CHANGE	10.26	16.57	21.45	30.05	8.91	6.81	8.22	14.82	19.58	12.82
18											
19	LESS: PERS. CONT. FOR SOCIAL INS.	598.	733.	854.	885.	996.	1132.	1317.	1526.	1653.	1951.
20	PERCENTAGE CHANGE	15.91	22.71	16.41	3.60	12.64	13.57	16.42	15.83	8.32	18.04
21											
22	RESIDENCE ADJUSTMENT	-189.	-192.	-213.	-225.	-220.	-268.	-308.	-338.	-354.	-391.
23	PERCENTAGE CHANGE	20.01	1.42	11.28	5.54	-2.53	21.86	15.18	9.70	4.60	10.59
24											
25	PER CAPITA PERSONAL INCOME ($)	3664.	4111.	4473.	4765.	5237.	5715.	6397.	7055.	7613.	8447.
26	PERCENTAGE CHANGE	10.00	12.20	8.81	6.53	9.91	9.13	11.93	10.29	7.91	10.95
27											
28	TOTAL PERSONAL INCOME (MIL 72 $)	14980.6	16093.8	16158.9	16216.9	17210.9	18052.4	19145.9	19684.5	19551.4	20029.4
29	PERCENTAGE CHANGE	8.22	7.43	0.40	0.36	6.13	4.89	6.06	2.81	-0.68	2.44
30											
31	PER CAPITA PERSONAL INCOME (72 $)	3665.	3889.	3846.	3806.	3976.	4101.	4291.	4342.	4248.	4343.
32	PERCENTAGE CHANGE	6.16	6.13	-1.12	-1.03	4.46	3.15	4.63	1.20	-2.17	2.22
33											
34	TN INDIVIDUAL IRS COLLECTIONS (MIL $)	1470.8	1725.3	1978.5	1947.8	2226.1	2632.7	2984.1	3295.6	3775.1	4397.8
35	PERCENTAGE CHANGE	10.23	17.31	14.68	-1.55	14.29	18.27	13.34	10.44	14.55	16.49
36											
37	DISPOSABLE PERSONAL INCOME (MIL $)	13510.	15286.	16814.	18356.	20446.	22523.	25558.	28688.	31256.	34559.
38	PERCENTAGE CHANGE	12.36	13.15	10.00	9.17	11.39	10.16	13.48	12.24	8.95	10.57
39											
40	PER CAPITA DISPOSABLE INCOME ($)	3305.	3694.	4001.	4308.	4723.	5116.	5728.	6329.	6792.	7493.
41	PERCENTAGE CHANGE	10.22	11.78	8.32	7.67	9.62	8.32	11.96	10.49	7.32	10.32
42											
43	DISPOSABLE INCOME (MIL 72 $)	13509.9	14461.5	14457.4	14661.1	15521.0	16163.1	17144.2	17656.1	17444.4	17768.3
44	PERCENTAGE CHANGE	8.43	7.04	-0.03	1.41	5.87	4.14	6.07	2.99	-1.20	1.86
45											
46	PER CAPITA DISPOSABLE INCOME (72 $)	3305.	3495.	3441.	3441.	3585.	3672.	3842.	3895.	3791.	3853.
47	PERCENTAGE CHANGE	6.36	5.75	-1.55	0.02	4.18	2.43	4.63	1.38	-2.67	1.64

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 18: TENNESSEE RETAIL SALES

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	TOTAL (MIL $)	7798.	9640.	10797.	11436.	12748.	14255.	15712.	16375.	17373.	18729.
2	PERCENTAGE CHANGE	11.22	23.61	12.01	5.92	11.47	11.82	10.22	4.22	6.09	7.80
3											
4	AUTOMOTIVE	1724.	2152.	2133.	2268.	2707.	3194.	3629.	3754.	3071.	3201.
5	PERCENTAGE CHANGE	17.25	24.84	-0.87	6.34	19.34	17.98	13.61	3.44	-18.19	4.23
6											
7	NONAUTOMOTIVE	6075.	7488.	8664.	9168.	10041.	11061.	12084.	12622.	14303.	15528.
8	PERCENTAGE CHANGE	9.62	23.26	15.71	5.81	9.52	10.16	9.24	4.45	13.32	8.57
9											
10											
11	TOTAL (MIL 72 $)	7798.	9120.	9284.	9134.	9677.	10230.	10540.	10078.	9696.	9629.
12	PERCENTAGE CHANGE	7.33	16.94	1.80	-1.61	5.95	5.71	3.02	-4.38	-3.79	-0.69
13											
14	AUTOMOTIVE	1724.	2036.	1834.	1812.	2055.	2292.	2434.	2310.	1714.	1646.
15	PERCENTAGE CHANGE	13.15	18.11	-9.90	-1.22	13.43	11.53	6.20	-5.09	-25.81	-3.99
16											
17	NONAUTOMOTIVE	6075.	7084.	7450.	7323.	7622.	7938.	8105.	7768.	7983.	7984.
18	PERCENTAGE CHANGE	5.79	16.61	5.16	-1.71	4.09	4.14	2.11	-4.16	2.76	0.01
19											
20											
21	MOTOR VEHICLE REGISTRATIONS	2294.	2467.	2568.	2726.	2805.	2996.	2911.	2995.	3271.	3533.
22	PERCENTAGE CHANGE	7.40	7.55	4.12	6.12	2.91	6.82	-2.83	2.89	9.21	8.01

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 19: TENNESSEE ENERGY CONSUMPTION - SELECTED CATEGORIES

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	ELECTRICITY (MIL. KWH)	40406.	43192.	42398.	42686.	45463.	50123.	50854.	49899.	51227.	49072.
2	PERCENTAGE CHANGE	7.47	6.90	-1.84	0.68	6.50	10.25	1.46	-1.88	2.66	-4.21
3											
4	RESIDENTIAL	20016.	21545.	21258.	22038.	22876.	25466.	25839.	24466.	25732.	24191.
5	PERCENTAGE CHANGE	5.09	7.64	-1.34	3.67	3.80	11.32	1.46	-5.31	5.17	-5.99
6											
7	COMMERCIAL	3411.	3588.	3464.	3516.	3647.	4210.	4247.	4123.	4373.	4387.
8	PERCENTAGE CHANGE	5.83	5.18	-3.45	1.49	3.72	15.44	0.87	-2.91	6.06	0.32
9											
10	INDUSTRIAL	16978.	18058.	17676.	17133.	18941.	20447.	20768.	21310.	21122.	20494.
11	PERCENTAGE CHANGE	10.79	6.36	-2.12	-3.07	10.55	7.95	1.57	2.61	-0.88	-2.97
12											
13	TOTAL GAS (MIL. THERMS)	2446.	2461.	2382.	2004.	1988.	1858.	1852.	2152.	2147.	2110.
14	PERCENTAGE CHANGE	0.12	0.61	-3.21	-15.87	-0.80	-6.54	-0.32	16.20	-0.21	-1.74
15											
16	RESIDENTIAL	455.	468.	449.	451.	470.	474.	489.	492.	471.	440.
17	PERCENTAGE CHANGE	-1.52	2.86	-4.06	0.45	4.21	0.85	3.16	0.61	-4.19	-6.66
18											
19	COMMERCIAL	383.	389.	362.	364.	360.	369.	351.	369.	360.	375.
20	PERCENTAGE CHANGE	1.59	1.57	-6.94	0.55	-1.10	2.50	-4.88	5.13	-2.44	4.17
21											
22	INDUSTRIAL	1608.	1604.	1571.	1189.	1158.	1015.	1012.	1291.	1316.	1295.
23	PERCENTAGE CHANGE	0.25	-0.25	-2.06	-24.32	-2.61	-12.35	-0.30	27.57	1.94	-1.60
24											
25	COAL (THOUS. TONS)	14349.	17440.	19894.	18848.	22362.	21694.	21621.	20173.	21679.	20496.
26	PERCENTAGE CHANGE	-2.16	21.54	14.07	-5.26	18.64	-2.99	-0.34	-6.70	7.47	-5.46
27											
28	GASOLINE (MIL. GAL.)	2094.	2264.	2212.	2288.	2409.	2473.	2588.	2524.	2437.	2341.
29	PERCENTAGE CHANGE	9.23	8.12	-2.32	3.42	5.32	2.64	4.66	-2.47	-3.45	-3.96
30											
31	FUEL OIL (THOUS. BARRELS)	14742.	15960.	16698.	18391.	24554.	27465.	29354.	26302.	20583.	18682.
32	PERCENTAGE CHANGE	23.12	8.26	4.62	10.14	33.51	11.86	6.88	-10.40	-21.74	-9.24

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 20: TENNESSEE ENERGY CONSUMPTION
(TRILLIONS OF BTU'S)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	ELECTRICITY	189.3	211.8	211.2	233.2	248.3	256.5	246.8	249.4	250.3	241.5
2	PERCENTAGE CHANGE	7.34	11.90	-0.32	10.43	6.48	3.32	-3.79	1.05	0.36	-3.52
3											
4	RESIDENTIAL	65.2	69.6	67.6	78.6	80.6	90.4	88.6	85.7	89.4	84.0
5	PERCENTAGE CHANGE	4.99	6.78	-2.92	16.33	2.55	12.12	-1.96	-3.27	4.32	-6.04
6											
7	COMMERCIAL	25.6	27.5	27.2	25.3	26.8	35.8	46.4	47.4	48.4	48.3
8	PERCENTAGE CHANGE	10.16	7.36	-1.00	-7.16	6.22	33.30	29.69	2.16	2.11	-0.21
9											
10	INDUSTRIAL	98.5	114.7	116.4	129.3	140.9	130.4	111.8	116.3	112.5	109.2
11	PERCENTAGE CHANGE	8.21	16.47	1.42	11.13	8.92	-7.44	-14.26	4.02	-3.27	-2.93
12											
13	NATURAL GAS	284.8	299.5	266.4	221.7	216.4	206.0	187.0	230.6	235.2	227.3
14	PERCENTAGE CHANGE	4.22	5.19	-11.06	-16.79	-2.40	-4.80	-9.22	23.32	1.99	-3.36
15											
16	RESIDENTIAL	55.2	46.9	44.6	44.9	44.6	44.4	40.4	45.9	46.0	42.9
17	PERCENTAGE CHANGE	13.97	-15.04	-4.86	0.60	-0.71	-0.50	-8.82	13.49	0.22	-6.74
18											
19	COMMERCIAL	46.9	46.9	45.7	43.3	39.0	35.8	31.4	43.5	45.1	44.1
20	PERCENTAGE CHANGE	3.32	-0.10	-2.50	-5.22	-10.08	-8.15	-12.24	38.48	3.68	-2.22
21											
22	INDUSTRIAL	139.9	164.4	151.5	113.9	117.2	111.7	100.5	120.6	126.1	124.3
23	PERCENTAGE CHANGE	5.03	17.51	-7.87	-24.82	2.94	-4.72	-10.04	20.01	4.56	-1.43
24											
25	OTHER	42.7	41.3	24.6	19.5	15.6	14.1	14.6	20.6	18.0	16.0
26	PERCENTAGE CHANGE	-7.47	-3.21	-40.53	-20.45	-20.35	-9.31	3.77	40.66	-12.62	-11.11
27											
28	COAL	449.4	539.7	476.6	470.8	560.2	555.0	568.5	544.7	577.8	566.7
29	PERCENTAGE CHANGE	19.71	20.10	-11.69	-1.23	18.99	-0.92	2.43	-4.19	6.08	-1.92
30											
31	FUEL OIL	86.1	93.3	97.7	107.5	144.5	161.6	172.2	154.3	120.5	109.4
32	PERCENTAGE CHANGE	23.16	8.31	4.72	10.03	34.42	11.84	6.56	-10.37	-21.91	-9.21
33											
34	GASOLINE	253.9	275.2	271.2	282.3	295.5	302.9	315.5	300.2	288.6	282.8
35	PERCENTAGE CHANGE	8.59	8.40	-1.45	4.07	4.67	2.50	4.16	-4.84	-3.86	-2.01
36											
37	OTHER	358.4	373.9	434.3	489.0	464.8	523.5	482.2	537.3	476.4	463.3
38	PERCENTAGE CHANGE	-6.96	4.32	16.15	12.59	-4.95	12.63	-7.89	11.43	-11.33	-2.75
39											
40	TOTAL ENERGY CONSUMPTION	1621.9	1793.5	1757.4	1804.4	1929.5	2005.4	1972.1	2016.5	1948.8	1891.0
41	PERCENTAGE CHANGE	7.13	10.58	-2.01	2.67	6.94	3.93	-1.66	2.25	-3.36	-2.97
42											
43	GROSS ENERGY CONSUMPTION	1432.6	1581.7	1546.3	1571.2	1681.2	1748.9	1725.3	1767.1	1698.5	1649.5
44	PERCENTAGE CHANGE	7.10	10.41	-2.24	1.61	7.01	4.02	-1.35	2.42	-3.88	-2.88
45											
46	NET ENERGY CONSUMPTION	1107.3	1196.4	1226.5	1256.3	1316.3	1391.3	1363.1	1421.3	1345.1	1299.9
47	PERCENTAGE CHANGE	2.00	8.05	2.52	2.43	4.78	5.70	-2.02	4.27	-5.36	-3.36

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 21: TENNESSEE ENERGY PRICES

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	ELECTRICITY (CENTS/KILOWATT-HOUR)	1.16	1.23	1.46	1.99	2.19	2.29	2.75	3.16	3.51	4.29
2	PERCENTAGE CHANGE	-0.72	6.10	18.23	36.38	10.21	4.36	20.19	14.84	11.19	22.14
3											
4	RESIDENTIAL	1.26	1.33	1.56	2.07	2.30	2.35	2.74	3.10	3.43	4.18
5	PERCENTAGE CHANGE	0.0	5.56	17.29	32.69	11.11	2.17	16.60	13.14	10.65	21.87
6											
7	COMMERCIAL	1.65	1.73	1.95	2.50	2.72	2.87	3.44	3.90	4.28	4.97
8	PERCENTAGE CHANGE	0.0	4.85	12.72	28.21	8.80	5.51	19.86	13.37	9.74	16.12
9											
10	INDUSTRIAL	0.95	1.02	1.24	1.78	1.96	2.09	2.62	3.08	3.45	4.27
11	PERCENTAGE CHANGE	-1.04	7.37	21.57	43.55	10.11	6.63	25.36	17.56	12.01	23.77
12											
13											
14	TOTAL GAS (CENTS/THERM)	6.4	6.7	7.8	10.0	12.3	16.0	18.4	22.1	26.7	32.3
15	PERCENTAGE CHANGE	10.25	5.42	15.81	28.15	23.54	30.25	14.95	19.75	21.15	20.87
16											
17	RESIDENTIAL	10.5	10.9	11.8	13.3	14.9	17.8	19.8	23.4	28.3	33.7
18	PERCENTAGE CHANGE	10.35	3.51	8.44	12.55	12.03	19.46	11.24	18.18	20.94	19.08
19											
20	COMMERCIAL	8.5	9.1	10.2	11.9	14.4	18.5	20.9	24.7	29.9	35.2
21	PERCENTAGE CHANGE	10.36	7.25	11.99	16.36	21.01	28.47	12.97	18.18	21.05	17.73
22											
23	INDUSTRIAL	4.7	4.9	6.1	8.1	10.6	14.3	16.9	20.8	25.3	31.0
24	PERCENTAGE CHANGE	10.49	4.83	23.41	33.86	30.86	34.91	18.18	23.08	21.63	22.53
25											
26	COAL PRICE ($/TON)	7.48	8.29	9.50	19.08	20.51	22.88	26.99	31.25	36.21	40.29
27	PERCENTAGE CHANGE	11.98	10.83	14.60	100.84	7.49	11.56	17.96	15.78	15.87	11.27

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 22: TENNESSEE COMMERCIAL BANKS AND SAVINGS AND LOANS
ASSETS AND LIABLITIES (MILLIONS OF DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	COMMERCIAL BANKS										
2	ASSETS	12103.	13928.	14666.	15434.	16422.	18127.	20042.	22056.	23804.	26103.
3	PERCENTAGE CHANGE	19.88	15.09	5.29	5.24	6.40	10.38	10.56	10.05	7.92	9.66
4											
5	TOTAL LOANS	6196.	7601.	8088.	8197.	9074.	10416.	11950.	12695.	12973.	13600.
6	PERCENTAGE CHANGE	23.33	22.69	6.40	1.36	10.69	14.79	14.72	6.24	2.19	4.83
7											
8	SECURITIES AND OTHER INVESTMENTS	5907.	6327.	6578.	7237.	7348.	7711.	8092.	9361.	10831.	12503.
9	PERCENTAGE CHANGE	16.47	7.11	3.97	10.01	1.53	4.94	4.94	15.68	15.70	15.44
10											
11	LIABILITIES										
12	TOTAL DEPOSITS	10329.	11691.	12287.	13098.	14249.	15840.	17141.	18494.	19798.	21156.
13	PERCENTAGE CHANGE	18.97	13.19	5.11	6.59	8.79	11.16	8.22	7.90	7.05	6.86
14											
15	DEMAND DEPOSITS	4594.	4994.	4849.	4974.	5146.	5626.	6030.	6262.	6057.	5666.
16	PERCENTAGE CHANGE	12.99	8.72	-2.90	2.56	3.46	9.34	7.17	3.85	-3.27	-6.45
17											
18	TIME DEPOSITS	5735.	6696.	7438.	8124.	9103.	10213.	11111.	12232.	13741.	15490.
19	PERCENTAGE CHANGE	24.23	16.77	11.08	9.22	12.05	12.19	8.79	10.09	12.33	12.73
20											
21	AVERAGE YIELDS (PERCENT)										
22	LOANS	7.49	8.69	9.81	8.83	9.04	9.31	10.04	11.51	13.10	15.51
23	PERCENTAGE CHANGE	-1.58	16.02	12.89	-9.99	2.38	2.99	7.81	14.71	13.76	18.40
24											
25	SECURITIES	4.95	5.25	5.67	5.98	6.31	6.26	7.78	9.03	10.70	12.44
26	PERCENTAGE CHANGE	-1.39	6.06	8.00	5.47	5.52	-0.79	24.28	16.04	18.52	16.25
27											
28											
29	SAVINGS AND LOANS										
30	ASSETS	2817.	3151.	3456.	4024.	4651.	5511.	6392.	6904.	7425.	7684.
31	PERCENTAGE CHANGE	19.48	11.87	9.67	16.42	15.59	18.48	15.99	8.01	7.54	3.50
32											
33	TOTAL LOANS	2432.	2779.	3036.	3432.	3975.	4754.	5551.	5997.	6327.	6505.
34	PERCENTAGE CHANGE	21.20	14.24	9.25	13.06	15.82	19.59	16.77	8.04	5.51	2.81
35											
36	SECURITIES AND OTHER INVESTMENTS	385.	373.	421.	592.	676.	757.	841.	907.	1097.	1179.
37	PERCENTAGE CHANGE	9.65	-3.09	12.82	40.62	14.27	11.98	11.14	7.83	20.96	7.44
38											
39	LIABILITIES										
40	TIME DEPOSITS	2436.	2692.	2935.	3435.	4006.	4684.	5291.	5723.	6270.	6473.
41	PERCENTAGE CHANGE	18.20	10.54	8.99	17.05	16.64	16.92	12.95	8.15	9.56	3.24

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

TENNESSEE ECONOMETRIC MODEL

HISTORICAL DATA AS OF DECEMBER, 1982

TABLE 23: TENNESSEE AGRICULTURAL OUTPUT
(MILLIONS OF DOLLARS)

#	DESCRIPTION	HISTORICAL DATA 1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	CASH RECEIPTS	831.4	1143.5	1014.6	1116.9	1281.5	1391.9	1594.1	1796.3	1757.9	1835.6
2	PERCENTAGE CHANGE	12.15	37.54	-11.27	10.08	14.74	8.62	14.53	12.68	-2.13	4.42
3											
4	CROPS	316.0	503.1	555.8	505.8	601.1	707.1	722.8	842.1	857.3	996.9
5	PERCENTAGE CHANGE	-1.11	59.21	10.47	-9.00	18.86	17.63	2.21	16.51	1.81	16.28
6											
7	MEAT ANIMALS	331.0	412.9	226.6	366.9	405.5	387.6	566.6	607.5	505.0	415.8
8	PERCENTAGE CHANGE	32.47	24.75	-45.13	61.93	10.51	-4.41	46.20	7.21	-16.87	-17.66
9											
10	DAIRY PRODUCTS	123.0	133.3	156.1	168.8	193.8	206.3	214.7	244.1	287.3	307.8
11	PERCENTAGE CHANGE	6.54	8.38	17.09	8.13	14.81	6.46	4.07	13.66	17.70	7.16
12											
13	POULTRY AND EGGS	61.4	94.1	76.2	75.4	81.1	90.9	90.0	102.6	108.4	115.1
14	PERCENTAGE CHANGE	8.72	53.39	-19.09	-1.00	7.52	12.09	-0.94	14.01	5.63	6.20
15											
16	EXPENSES	294.5	416.4	371.8	525.1	546.1	689.0	707.2	784.1	989.1	858.4
17	PERCENTAGE CHANGE	9.10	41.40	-10.71	41.22	4.00	26.17	2.65	10.87	26.14	-13.21
18											
19	GROSS OUTPUT	536.9	727.1	642.8	591.8	735.4	702.9	886.9	1012.1	768.8	977.2
20	PERCENTAGE CHANGE	13.89	35.43	-11.59	-7.93	24.26	-4.42	26.18	14.12	-24.04	27.11
21											
22	GROSS OUTPUT (MIL 72 $)	536.9	460.8	427.9	407.2	514.5	481.4	492.5	483.3	402.5	495.1
23	PERCENTAGE CHANGE	-3.72	-14.18	-7.13	-4.83	26.35	-6.45	2.32	-1.87	-16.73	23.01
24											
25	AGRICULTURAL JOBS	153.0	147.0	134.0	138.0	143.0	131.0	116.0	107.0	101.0	96.0
26	PERCENTAGE CHANGE	1.32	-3.92	-8.84	2.99	3.62	-8.39	-11.45	-7.76	-5.61	-4.95

SOURCE: TENNESSEE ECONOMETRIC MODEL, CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.